Theme: Applied Research & Innovation for Development

Venue: Kabarak University Main Campus

Date: 15th - 18th October 2013
Vision
To become a Center of Academic Excellence founded on Christian values.

Mission
To provide a holistic quality education based on research, practical skills and Christian values.

Philosophy
To provide quality education in biblical perspective that transforms lives.

Core Values

• Integrity
• Excellence and Professionalism
• Patriotism
• Commitment to serve
• Innovativeness and Creativity
• Being mindful of others

Moral Code
We at all times and in all places purpose to set apart in our hearts Jesus Christ as Lord (1 Peter 3:15)
KABARAK UNIVERSITY 3RD ANNUAL INTERNATIONAL CONFERENCE

15th - 18th October 2013

Theme: Applied Research & Innovation for Development

Venue: Kabarak University Main Campus
H.E. Daniel Toroitich Arap Moi, CGH.
The Founder and Chancellor of Kabarak University.
The second President of the Republic of Kenya
FOREWORD

I would like to welcome all participants to the 3rd International Research conference. This year’s conference focuses on applied Research and Innovation for Development. Research is a key activity of a university and a crucial national asset. Investing in research as a university does not only develop a research culture but promote innovation and generation of wide field of knowledge. It also promotes innovation which leads to new products in the market and defines the University as a creator and consumer of knowledge.

Numerous discoveries and innovations which have considerably improved our everyday lives and given us better understanding of the world we live in have been as a result of research activities. We applaud the institutions of higher learning and research institutions for their role in promoting research in Kenya and the world over. Such is demonstrated in the number of institutions that are participating in this conference.

Potential growth of any economy depends largely on rigorous research activities geared towards solving national problems and providing answers to industry. This initiative has real potential to improve the ability of stakeholders such as industries, communities and the government to understand and tackle issues of national significance. There is need for researchers to focus on applied research which is problem driven research that addresses specific human and industrial needs. This approach is critical as Kenya focuses on the attainment of Vision 2030.

I wish to recognize the critical role played by the planning committee and the Institute of Post Graduate Studies and Research who have worked tireless to make this conference a success. I also wish to thank the National council of Science and Technology that has consistently supported our research conferences

Prof. Jones M. Kaleli
Vice Chancellor
Kabarak University
PROGRAM

15TH OCTOBER 2013 - STUDENT EXHIBITIONS

Time: 8.00 a.m. - 9.00 a.m.
Venue: KLAW
Facilitator: Mrs. Tabitha Kaliakamur /Ms. Margaret Ningala

<table>
<thead>
<tr>
<th>Activity</th>
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<tbody>
<tr>
<td>Registration</td>
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</tbody>
</table>

SETTING EXHIBITIONS

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.30 am – 1.30 pm</td>
<td>Viewing Exhibitions / Lunch Break</td>
</tr>
</tbody>
</table>

Plenary Session

Time: 2 p.m. - 4.00 p.m.
Venue: KLAW 5
Chair: Prof. Kepha Rabah
Rapporteur: Mr. Moses Thiga

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.00 pm – 4.00 pm</td>
<td>Keynote Speech: Prof. Shaukat A. Abdulrazak is the CEO, National Commission for Science, Technology and Innovation (NACOSTI). Topic: Promoting Student Innovations</td>
</tr>
</tbody>
</table>

MAIN CONFERENCE DAY 1 - 16TH OCTOBER 2013

Time: 8.00 a.m. - 9.00 a.m.
Venue: KLAW
Facilitator: Mrs. Tabitha Kaliakamur /Ms. Margaret Ningala

Activity
Registration

PRESENTATIONS BASED ON SYMPOSIA

Symposium 1– B2013

Time: 9.00 a.m. - 11.00 a.m.
Venue: KLAW 5
Chair: Prof. Mulengani Katwalo
Rapporteur: Mr. E. Rono
<table>
<thead>
<tr>
<th>Time: 9.00 a.m. -11.00a.m.</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kamau John Gathii &amp; Phillip Ragama (Kabarak University, Kenya)</td>
<td>B2013-01 Effect of Income and Provision of Physical Facilities on Students’ Performance in Kenya: A Case of Nakuru County</td>
</tr>
<tr>
<td>Grace Mumbi ( University of Kabianga, Kenya)</td>
<td>B2013-02 Employee factors on the implementation of ISO 9001: 2008 certification in University of Kabianga</td>
</tr>
<tr>
<td>Kibet Joshua Kiprop (JKUAT, Kenya)</td>
<td>B2013-03 Determinants of Loan Repayment in Microfinance for Water Program of K-Rep Bank, Kenya</td>
</tr>
<tr>
<td>Mercy Gakii Ben (JKUAT)</td>
<td>B2013-04 Factors Influencing Employee Participation in Corporate Social Responsibility</td>
</tr>
<tr>
<td>Grace N. Kariba, (JKUAT, Nakuru)</td>
<td>B2013-05 Role of Training Record Management Systems on Organization Learning: A Case Study of Telkom Kenya</td>
</tr>
<tr>
<td>Caleb Odhiombo Onjure (JKUAT, Nakuru), Tom Nyamache (Mount Kenya University, Nakuru)</td>
<td>B2013-08 Kenyan Dry Cell Battery Manufacturers Strategies to Gain Competitive Advantage: A Case Study Of Eveready East Africa Limited</td>
</tr>
<tr>
<td>11 am to 11.30 am</td>
<td>Tea/Coffee Break / Exhibition</td>
</tr>
</tbody>
</table>

**Symposium 2A – S2013**

**Time:** 9.00 a.m. - 11.00 a.m.

**Venue:** KLAWE 1

**Chair:** Mr. Philip Otieno

**Rapportuer:** Mr. Maurice Ojijo

<table>
<thead>
<tr>
<th>Time: 9.00 a.m. - 11.00 a.m.</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ruth Anyango Oginga (Kabarak University)</td>
<td>S2013-04 Mobile Interactive Messaging System for Patients’ in Collaboration with Health Workers</td>
</tr>
<tr>
<td>N. O. Oyie (JKUAT, Kenya), P. K. Langat (Stellenbosch, S. Africa)and S. Musyoki (Tohoku Univ. Japan)</td>
<td>S2013-07 M-FCRA: A Mobility-aware Resource Allocation Scheme in Femtocell Networks</td>
</tr>
<tr>
<td>Moses M Thiga (Kabarak Univ), Joseph Siror (The National Economic &amp; Social Council of Kenya), Jason Githeko (Egerton Univ), Kageni Njagi (Kabarak Univ)</td>
<td>S2013-11 Factors Influencing the Intention to Use Location-based Mobile Advertising among Micro-enterprises</td>
</tr>
<tr>
<td>Masese .B.Nelson (Kabarak Univ.)</td>
<td>S2013-13 Evaluation of Mobile Social Software for Sustainable Development</td>
</tr>
<tr>
<td>Title</td>
<td>Time: 11 am to 11.30 am</td>
</tr>
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<tr>
<td>Edgar Obege, Eliveha, Patrick M. Mwangi and George T. Thiong’o</td>
<td>S2013-33 Evaluation Of Termiticidal Properties Of Chemically Modified Cashew Nut Shell Liquid</td>
</tr>
</tbody>
</table>

Symposium 2 B– S2013

Time: 9.00 a.m. - 11.00 a.m.
Venue: Library Conference Room
Chair: Dr. Sellah Kebenei
Rapportuer: Mr. Zipporah Mwololo

<table>
<thead>
<tr>
<th>Title</th>
<th>Time: 11 am to 11.30 am</th>
<th>Venue: Library Conference Room</th>
<th>Chair: Dr. Sellah Kebenei</th>
<th>Rapportuer: Mr. Zipporah Mwololo</th>
</tr>
</thead>
<tbody>
<tr>
<td>Joel Cherus (Kabarak Univ), Joseph Siror (The National Economic &amp; Social Council of Kenya), Jason Githeko (Egerton Univ), Kageni Njagi (Kabarak Univ)</td>
<td>S2013-14 Fraud Vulnerability of Kenya’s National Identity Card System</td>
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<tr>
<td>Omwenga Josephat Mukuha and Wyclife Nyandusi Ayako (Kabarak University)</td>
<td>S2013-15 Web Based Data Extraction For Information Retrieval</td>
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<tr>
<td>Mungai, Joseph and Wanjiku, Ng’ang’a (University of Nairobi)</td>
<td>S2013-18 Benchmarking of Undergraduate Computing Curricula in Kenya</td>
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</tr>
<tr>
<td>Joel Cherus (Kabarak Univ), Joseph Siror (The National Economic &amp; Social Council of Kenya), Jason Githeko (Egerton Univ), Kageni Njagi (Kabarak Univ)</td>
<td>S2013-31 Integrating Mobile Money with Online Payment Gateways: A Case Study of Kenya</td>
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<tr>
<td>Omwenga Josephat Mukuha and Wyclife Nyandusi Ayako (Kabarak University)</td>
<td>S2013-32 Identity Fraud: A Literature Review and Future Research Directions</td>
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</tbody>
</table>

Symposium 3 - E2013- A

Time: 9.00 a.m. - 11.00 a.m.
Venue: KLAW 4
Chair: Prof. T.M.O. Ayodo
Rapportuer: Mrs. Eunice Njenga

<table>
<thead>
<tr>
<th>Title</th>
<th>Time: 9.00 a.m. - 11.00 a.m.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mutwiri F. Gacheri (Kenya Methodist University)</td>
<td>E2013-01 Factors Influencing the Participation of Women in Distance Education: A Case of Kenya Methodist University</td>
</tr>
<tr>
<td>Author(s)</td>
<td>Title</td>
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<tr>
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</tr>
<tr>
<td>Kibaara, T.M and Grace W. Kabura (Kenya Methodist University)</td>
<td>E2013-03 Factors Influencing Academic Performance In Urban Informal Settlements In Kenya: A Case Study Of Public Primary Schools of Kibera Slums, Nairobi County</td>
</tr>
<tr>
<td>Amos Kimani and Agnes Wanjiru Kamau (Laikipia University)</td>
<td>E2013-04 Analysis of High School Drop-Out Rates in Nyandarua County</td>
</tr>
<tr>
<td>Gidudu Hannah Lunyolo, (Kabarak University)</td>
<td>E2013-05 The Role of Private Primary Schools in Providing Education in Mbale Municipality In Uganda</td>
</tr>
<tr>
<td>Emily Ayieta Ondondo (Pwani University)</td>
<td>E2013-06 Communication Impairments and Knowledge Acquisition</td>
</tr>
<tr>
<td>David Langat(Athenai Secondary) and Betty Tikoko (Kabarak University)</td>
<td>E2013-07 An Evaluation of High Altitude Training Camps in Kericho County, Kenya</td>
</tr>
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<td></td>
<td>11 am to 11.30 am</td>
</tr>
</tbody>
</table>

**Symposium 3 - E2013 – B**

**Time:** 9.00 a.m. - 11.00 a.m.

**Venue:** Senate Boardroom

**Chair:** Dr. Irene C. Asienga

**Rapporteur:** Ms. Daisy J.C. Bowen

<table>
<thead>
<tr>
<th>Time 9.00 a.m -11.00 a.m</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benedict Toroitich (The Catholic University of Eastern Africa), Peter Kirui (Karatina University)</td>
<td>E2013-41 Mass Media and Society: More of Partners than Protagonists</td>
</tr>
<tr>
<td>Michael M. Ndonye, Beatrice W. Maina &amp; Dorcas J. Kebernei (Egerton Univ.)</td>
<td>E2013-42 Politics and Sensational Newspaper Headlines: Debate around Jubilee Government's Laptops and the Teacher's Strike</td>
</tr>
<tr>
<td>Tom Kwanya (University of KwaZulu-Natal, South Africa)</td>
<td>E2013-47 The Role of Mass Media in Health Promotion in the Republic of South Sudan</td>
</tr>
<tr>
<td>Daniel Otieno (Africa Nazarene University)</td>
<td>E2013-50 Blended Learning in Higher Education - Perceptions and Preferences</td>
</tr>
<tr>
<td>Sharon Jerotich Koech and Bernard Chemwei(Kabarak University)</td>
<td>E2013-13 Institutional Factors Influencing Teacher Turnover in Secondary Schools in Baringo County, Kenya</td>
</tr>
</tbody>
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<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>11.00 – 11.30</td>
<td>Tea/Coffee Break + Exhibition</td>
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<td>Precincts of the KLAW</td>
</tr>
</tbody>
</table>
OPENING CEREMONY

**Time:** 11.30 a.m. - 12.20 p.m.

**Venue:** KLaw 5

**Chair:** Dr. John Ochola

**Rapportuer:** Ms Janet Bunei

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>11.30 am - 11.35 am</td>
<td>Acknowledging presence of guests and Opening Prayer – University Provost, Rev. Prof. Jacob Kibor</td>
</tr>
<tr>
<td>11.35 am - 11.45 am</td>
<td>Kabarak University Choir - Mr. Fredrick Ngala</td>
</tr>
<tr>
<td>11.45 am - 11.50 am</td>
<td>Welcome Remarks - Vice Chancellor, Rev. Prof. Jones Kaleli</td>
</tr>
<tr>
<td>11.50 am – 11.55 am</td>
<td>Remarks - University Council Chairman, Prof. John Lonyangapuo</td>
</tr>
<tr>
<td>12.20 pm -1.00 pm</td>
<td>Keynote Address - Prof. Patrick Lumumba “The Integration of Faith and Learning in the Law Profession”</td>
</tr>
<tr>
<td>1.00 pm</td>
<td>Vote of Thanks – Prof. Ronald Chepkilot</td>
</tr>
<tr>
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<td>Closing Prayer – Pastor William Koros</td>
</tr>
</tbody>
</table>

GROUP PHOTO

1.00 pm – 2.00 pm

Lunch Break & Exhibitions

PRESENTATIONS BASED ON SYMPOSIA

**Symposium 1**

**Time:** 2.00 p.m. - 4.00 p.m.

**Venue:** KLaw 5

**Chair:** Dr. Robert Otuya

**Rapportuer:** Ms Caroline Cherotich

<table>
<thead>
<tr>
<th>Time 2.00 pm- 4.00 p.m</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Betty C. Bii, Alice Mwazuna, Sabianus Odhiambo Matite (Jaramogi Oginga Odinga University, Bondo)</td>
<td>B2013-09 A Survey of E-Recruitment at Tea Industries in Kericho</td>
</tr>
<tr>
<td>Koech Ronald (Pwani University, Kilifi), Donald Ogweno, Moses Imo and Chepneg’eno Winrose (Moi University, Eldoret), Paul Oduori, (University of Eldoret)</td>
<td>B2013-11 The Use of Linear Programming in Land Use Planning Strategies for Increased Food Crop Production</td>
</tr>
<tr>
<td>Title</td>
<td>Authors</td>
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<tr>
<td>B2013-12 Effects of Lean Production on Organizational Performance: A Case Study of Unga Limited, Nakuru</td>
<td>Pauline Keitany, Mbeche Wilfred, Riwo Abudho (JKUAT)</td>
</tr>
<tr>
<td>B2013-13 Regional Integration and Trade in Sub-Saharan Africa: An Analysis</td>
<td>Tom Nyamache (Mount Kenya University, Nakuru), Ruth Nyambura (Egerton University)</td>
</tr>
<tr>
<td>B2013-14 Technology Adoption in Rural Areas for Sustainable Development</td>
<td>Ng’ang’a, S.I1, Kiumbe, P.M. and Kabethi, J.M. (Karatina University)</td>
</tr>
</tbody>
</table>

### Symposium 2 S2013

**Time:** 2.00 p.m. - 4.00 p.m.  
**Venue:** K LAW 1  
**Chair:** Dr. Christopher Maghanga  
**Rapporteur:** Mr. Timothy Sawe

<table>
<thead>
<tr>
<th>Time 2.00 p.m-4.00 p.m</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Violet M. Ndeda, Dickson O. Owiti, Ben O. Aketch, David M. Onyango(Maseno University, Kisumu, Kenya)</td>
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<td></td>
<td>Cheluget Kipkemboi, (Kenyatta University,Kenya)</td>
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<td></td>
<td>Hellen W. Warungu  (Karatina University), David Liti (University of Eldoret)</td>
</tr>
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<td></td>
<td>Khalid Rashid, Francis Nyamu Wachira, Alfred Orina Isaac, James Nyariki Nyabuga, Raphael Mutchangi Ngure and, (Egerton Univ), Bernard Wanyonyi and Grace Murilla (Kenya Agricultural Research Institute, Kenya), Lilian Chebet Kerio (Tea Research Foundation of Kenya).</td>
</tr>
</tbody>
</table>
Symposium 3 E2013 - A
Time: 2.00 p.m. - 4.00 p.m
Venue: K LAW 4
Chair: Mr. Fredrick Ngala
Rapportuer: Rev. Simon Kiuta

<table>
<thead>
<tr>
<th>Time 2.00 p.m- 4.00 p.m</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bernard Chemwei, Sharon Jerotich Koech and Sarah C. Langat Ngetich (Kabarak University Kenya)</td>
<td>E2013-09 Assessment of ICT integration into Instruction in Teacher Education Institutions in Kenya</td>
</tr>
<tr>
<td>Alfred .O. Akwala &amp; Okumu Bigambo (Moi University)</td>
<td>E2013-10 Communication and Maternal-Child Health Promotion.</td>
</tr>
<tr>
<td>Abel Nyamesa Morara and Bernard Chemwei(Kabarak University)</td>
<td>E2013-11 Drop Out among Pupils in Rural Primary Schools in Kenya: The Case of Nandi North District, Kenya</td>
</tr>
<tr>
<td>Peter Ng’ok, AIC Missionary College- Eldoret (PhD candidate at University of Fort Hare in South Africa)</td>
<td>E2013-12 Factors Contributing to Increased Indiscipline in Secondary Schools in Kenya</td>
</tr>
<tr>
<td>Edward Kinyua Waweru and Moses Gatambuki Gathigi (Karatina University)</td>
<td>E2013-30 Teachers’ Viewpoints on the Use of ICT in the Teaching of Languages in Kenya</td>
</tr>
<tr>
<td>Julia A. Wachuka Gitahi (Kenya Methodist University)</td>
<td>E2013-33 Factors Influencing the Choice of Suitable Web-Based Learning for Distance Learners: The Case of Kenya Methodist University</td>
</tr>
</tbody>
</table>

Symposium 3 - E2013 – B
Time: 2.00 p.m. - 4.00 p.m.
Venue: Senate Boardroom
Chair: Prof. T.M.O. Ayodo
Rapportuer: Mrs. Eunice Njenga

<table>
<thead>
<tr>
<th>Time 9.00 a.m - 11.00 a.m</th>
<th>Title</th>
</tr>
</thead>
</table>
Dorcas N. Githaiga & Gladys Kiptiony, (Kabarak Univ.) E2013-48 Contribution of Selected Family Factors on the Influx of Street Children: A Case of Nakuru Municipality

Lucy W. Karanja (Kenya Methodist University) E2013-53 Frequency of Nutritional Counseling Services: Does it have any Value on the Adherence to the Dietary Therapies among Diabetic Patients in Nakuru County?

James Kay (Kabarak University) E2013-54 Peer Sexual Harassment In Higher Learning: A Study Of Forms, Prevalence And Perceptions

Simon Sila Kaitho (Kabarak University) E2013-55 Stress Experiences and their Contribution to Students’ Performance in Biology in Mixed Secondary Schools in Kiambaa Division of Kiambu County, Kenya

DAY 2 - 17TH OCTOBER 2013

Time: 8.00 a.m. - 9.00 a.m.
Venue: KLaw
Facilitator: Mrs. Tabitha Kaliakamur /Ms. Margaret Ningala

Activity
Registration

PRESENTATIONS BASED ON SYMPOSIA

Symposium 1 – B2013

Time: 9.00 a.m. - 11.00 a.m.
Venue: KLaw 5
Chair: Dr. Lily Njanja
Rapportuer: Mr. Patrick Kibati

<table>
<thead>
<tr>
<th>Time 9.00 a.m- 11.00 a.m.</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yatich K. Henry (Kabarak University)</td>
<td>B2013-16 Linkages and the Performance of Livestock Farming. A Survey of Small Scale Livestock Farmers in Kerio Valley-Baringo County</td>
</tr>
<tr>
<td>Lazaru Koech, Alice Ngele Mwazuna and Paul Kingori (University of Kabianga)</td>
<td>B2013-17 Factors influencing Effective Outsourcing of Information Technology Services in Private Educational Institutions in Kericho County.</td>
</tr>
<tr>
<td>Kellen Kiambati, Julius Itunga (JKUAT)</td>
<td>B2013-18 The role of Board Complexity in the Financial Performance of Commercial Banks in Kenya</td>
</tr>
<tr>
<td>Tsawe-Munga Chidongo, (Pwani University)</td>
<td>B2013-19 Traditional and Modern Governance Institutions: Can they Corporately Work for Efficient Services in Contemporary Kenya?</td>
</tr>
</tbody>
</table>
### Symposium 2 – S2013 – A

**Time:** 9.00 a.m. - 11.00 a.m.  
**Venue:** KLAW 3  
**Chair:** Mr. Phillip Ragama  
**Rapporteur:** Mr. Joel Koima

<table>
<thead>
<tr>
<th>Time 9.00a.m- 11.00 a.m</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kaleb A. Mwendwa, Agevi Humphrey, Tsingalia M. Harrison and Onzere Ernest, (Masinde Muliro University of Science &amp; Technology, Kenya)</td>
<td>S2013-05 Efforts towards Increased Forest Cover as a Measure to Mitigate Effects of Climate Change</td>
</tr>
<tr>
<td>Moses A. Abwire (Moi University, Eldoret, Kenya)</td>
<td>S2013-06 The role of African Cultures in the Conservation of the Environment: A Philosophical Perspective</td>
</tr>
<tr>
<td>Eliud Garry Michura (Kabarak University)</td>
<td>S2013-16 Integrated Approach: Truckers’ Parking Bay Facility, as Environmental Hazard in Salgaa “Wild West”Nakuru, Kenya.</td>
</tr>
<tr>
<td>Henry B.O. Lung’ayia (Masinde Muliro University of Science and Technology)</td>
<td>S2013-19 Diatom Ecological Indicator Values in the Assessment of Water Quality in Three Rivers of Lake Victoria Catchments</td>
</tr>
<tr>
<td>Hyrine G.Munga (Technical University of Mombasa), James B.Kung’u and Judy W.Kariuki (Kenyatta University), Nicholas O.Oguge (University of Nairobi)</td>
<td>S2013-23 Impacts of Climate Change on Natural Resources and Gender: Adaptation Strategies among the Samburu Pastoralist Communities of Northern Kenya.</td>
</tr>
<tr>
<td>Oscar Kisaka, Mucheru-Muna M. Ngetich F.K.,and Mugwe J(Kenyatta Univ), Mugendi D., (Embu Univ. College), and Mairura, F.</td>
<td>S2013-24 Characterization Of Seasonal Rainfall Variability And Drought Probability Of The Semi Arid Areas Of Mbeere Region In Embu County, Kenya</td>
</tr>
</tbody>
</table>

### 11 am to 11.30 am

**Tea/Coffee Break / Exhibition**
**Symposium 3 – E2013 – A**

**Time:** 9.00 a.m. - 11.00 a.m.  
**Venue:** KLA W 4  
**Chair:** Mr. Antony Somba Mang’oka  
**Rapportuer:** Mrs. Lilian Birir

<table>
<thead>
<tr>
<th>Time 9.00 am-11.00 a.m</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agnes Kariungi, Africa (Nazarene University)</td>
<td>E2013-08 The Perceptions of Believers on an Effective Church Leader: A Study of Selected Churches from Naivasha Location</td>
</tr>
<tr>
<td>Ruth Chweya (Kisii Univ), Fredrick Awuor (Jaramogi Oginga Odinga Univ. of Science and Technology)</td>
<td>E2013-16 ICT and the Church: Role of ICT in Evangelism</td>
</tr>
<tr>
<td>Ruth Nyambura and Reuben Matheka (Egerton Univ.), Peter Waweru (Laikipia Univ. College), Tom Nyamache (Mount Kenya Univ.)</td>
<td>E2013-17 Hair: A Samburu Identity Statement</td>
</tr>
<tr>
<td>Jackson Ndegwa(Kabarak University)</td>
<td>E2013-19 The Revolution of the African Gulags</td>
</tr>
<tr>
<td>Joel k. Ng’etich, (Moi University)</td>
<td>E2013-21 Journalism in Times of Change: An Exploration of the Professional Identity of Kenyan Journalists</td>
</tr>
<tr>
<td>Amos Kimani &amp; Peter Mwaura (Laikipia Univ.)</td>
<td>E2013-27 Contraceptives- A Hex Or a Vex?: A Case Study of Naivasha District</td>
</tr>
<tr>
<td>Pamela Karambu Muriungi (Kenya Methodist Univ.), Fransicah Wamocho &amp; Geoffrey Karugu (Kenyatta Univ.)</td>
<td>E2013-32 Gender Based Barriers to Effective Education for Refugees in the Dadaab complex, Kenya.</td>
</tr>
<tr>
<td>Josephat K. Kigo, Patrick Gitonga Njeru, Nicholas Mwenda Jacob, Hillary M. Chakava, Kenya Methodist University</td>
<td>E2013-02 Pure And Applied Science For Vision 2030</td>
</tr>
</tbody>
</table>

11 am to 11.30 am  
**Tea/Coffee Break / Exhibition**

**Symposium 3 – E2013 – B**

**Time:** 9.00 a.m. - 11.00 a.m.  
**Venue:** Library Conference room  
**Chair:** Dr. Betty Tikoko  
**Rapportuer:** Dr. Chemwei

<table>
<thead>
<tr>
<th>Time 9.00 a.m -11.00 a.m</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pst. William Koros (Kabarak University, Kenya)</td>
<td>E2013-34 The Impact of Caring and Involved Fathers on Child Behaviour: A Case of Street Children and Juvenile Delinquents in Nakuru County</td>
</tr>
<tr>
<td>Speaker(s)</td>
<td>Abstract</td>
</tr>
<tr>
<td>---------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Michael M. Ndonye (Egerton Univ.), Felicia Yieke &amp; James O. Ogola (Laikipia Univ.)</td>
<td>E2013-35 Ethnic Stereotyping in Kenyan Television Comedy Shows: Harm or Humor?</td>
</tr>
<tr>
<td>Emily M. Nyangena, Erick K. Bor (Egerton Univ. Kenya)</td>
<td>E2013-37 Non-Governmental Organizations’ (NGOs) Participation in Empowerment of HIV/AIDS Orphaned Children in Njoro District, Nakuru County, Kenya</td>
</tr>
<tr>
<td>Fathima Azmiya (Technical University of Mombasa)</td>
<td>E2013-38 Development-Induced Displacement: Analyzing the Impact of Displacement as a Result of The Proposed New Port in Lamu, Kenya</td>
</tr>
<tr>
<td>Oteyo John Samson, Margaret Mwenje &amp; Muchiri Karega (Kenyatta Univ.), Mary Kariuki (Egerton Univ.)</td>
<td>E2013-40 Influence of Family Risks and Assets on Alcohol, Tobacco and other Drugs Behaviors among Secondary School Students in Kiambu and Nairobi Counties, Kenya</td>
</tr>
<tr>
<td>Peter N. Mbogo, Margaret W. Mwinji, Judith A. Otieno (Mount Kenya Univ.)</td>
<td>E2013-45 An Assessment of Aerobics Exercises on Dancing Skills as a Performing Art in Nakuru Fitness Centers</td>
</tr>
</tbody>
</table>

**Symposium 4 L2013**

**Time:** 9.00 a.m. - 11.00 a.m.  
**Venue:** Senate Boardroom  
**Chair:** Mr. Justus Otiso  
**Rapportuer:** Ms. Mercy Muendo

<table>
<thead>
<tr>
<th>Time 9.00 a.m - 11.00 a.m</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kenneth Odhiambo &amp; Claris Kasamba (University of Kabianga)</td>
<td>L2013-01 Court Interpreters Accommodation Strategies in Kenyan Courtroom Communication: Evidence from Subordinate Courts in Nyanza Province</td>
</tr>
<tr>
<td>Bruce Heilman and Beatrice Ndirangu (University of Dar es Salaam Tanzania)</td>
<td>L2013-44 Understanding the Position of Human Rights in Africa</td>
</tr>
<tr>
<td>Kioko Beatrice &amp; Omari Lucy (Africa Nazarene Univ)</td>
<td>L2013-02 Governance and Leadership</td>
</tr>
<tr>
<td>Jane Ondieki</td>
<td>L2013-03 Causes of Kenyan Police Officers Extrajudicial Killings and Suicidal Tendencies</td>
</tr>
<tr>
<td>Chris Masitta (Kabarak University)</td>
<td>L2013-04 Electoral Reform: Extinguishing Ethnic Hegemony in the Executive</td>
</tr>
<tr>
<td>Boaz Amoro Nyakeri, Eugene Masai, Samantha Mugo (Africa Nazarene University)</td>
<td>L2013-05 Legal Education, Training and Research</td>
</tr>
</tbody>
</table>
Plenary Session

Time: 11.00 a.m. - 12.30 p.m.
Venue: KLAW 5
Chair: Mr. Charles Khamala
Rapportuer: Ms. Sylvia Waliaula

<table>
<thead>
<tr>
<th>Time Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>11.30 a.m. -12.30 p.m Topic: Applied research &amp; innovation in Telecommunications- Mr. Joseph Ogutu (Safaricom, Kenya)</td>
</tr>
</tbody>
</table>

12.30 pm – 2.00 pm Exhibition / Lunch Break

Symposium 1 – B2013

Time: 2.00 p.m. - 4.00 p.m.
Venue: KLAW 5
Chair: Dr. Maina Waiganjo
Rapportuer: Mr. Masese

<table>
<thead>
<tr>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>B2013-24 An Evaluation on the Management of High Altitude Training Camps in Kericho County, Kenya</td>
</tr>
<tr>
<td>B2013-25 Sports as Emerging Economies and Regional Development</td>
</tr>
<tr>
<td>B2913-26 The Role of State and Non-State Actors in Peace-Building in Mt Elgon Region</td>
</tr>
<tr>
<td>B2013-27 Factors Influencing Labour Turnover in Fuel Service Stations: A case of Nyahururu Town</td>
</tr>
<tr>
<td>B2013-31 The Role of Governance and Leadership in Managing Performance in Public Service in Kenya</td>
</tr>
</tbody>
</table>
Symposium 2 – S2013

Plenary Session

Time: 2.00 p.m. - 4.00 p.m.
Venue: KLA W 1
Chair: Dr. Sellah Kebenei
Rapporteur: Mr. Wycliffe Ayako

<table>
<thead>
<tr>
<th>Time 2.00 p.m. - 4.00 p.m.</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cheluget Kipkemboi, (Kenyatta University, Kenya)</td>
<td>S2013-09 Bacterial Risk and Contamination Level of Raw Drinking Water from Ground and Surface Water Sources in Wamba Division, Samburu District.</td>
</tr>
<tr>
<td>Khalid Rashid, Francis Nyamu Wachira, Alfred Orina Isaac, James Nyariki Nyabuga, Raphael Muchangi Ngure and, (Egerton Univ), Bernard Wanyonyi and Grace Murilla (Kenya Agricultural Research Institute, Kenya), Lilian Chebet Kerio (Tea Research Foundation of Kenya).</td>
<td>S2013-27 Kenyan Purple Tea Anthocyanins Ability Cross the Blood Brain Barrier Reinforcing Brain Antioxidant Capacity in Mice</td>
</tr>
<tr>
<td>Edwin Madegwa( Kisii University)</td>
<td>S2013-28 Productive Strategies of Making a Living out of Waste Plastic Bags: A Case of Kisii Town</td>
</tr>
</tbody>
</table>

Symposium 3 – E2013

Time: 2.00 p.m. - 4.00 p.m.
Venue: KLA W 4
Chair: Dr. Irene Asienga
Rapporteur: Mr. Jonathan Maritim

<table>
<thead>
<tr>
<th>Time 2.00 p.m. - 4.00 p.m.</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Joshua Odhiambo Ogal and Jackson John Kitetu (Kabarak University)</td>
<td>E2013-22 Relationship Between Factors which Contribute to Teachers’ Job Satisfaction and Academic Achievement among Secondary Schools in Homa-Bay County, Kenya</td>
</tr>
<tr>
<td>Edwin Wangoli-Wanjawa(Pwani University)</td>
<td>E2013-23 Rethinking Higher education in Kenya: Energizing Complimentarity Linkages Between the Delivery and Transformative Contexts to Leverage Vision 2030</td>
</tr>
</tbody>
</table>
Day 3 – 18 October 2013

Time: 8.00 a.m. - 9.00 a.m.
Venue: KLAW
Facilitator: Mrs. Tabitha Kaliakamur/Ms. Margaret Ningala
Activity
Registration

Plenary Session
Time: 9.00 a.m. – 10.00 P.m.
Venue: KLAW 5
Chair: Rev. Joseph Kitur
Rapportuer: Mr. Eliud Wasike
Prayer: Pst. William Koros

Topic: Role of Industrial Property in Promoting Research and Innovation for Development. Mr. Sylvance Sange (Kenya Industrial Property Institute)

10.00 – 10.30 Tea/Coffee Break

PRESENTATIONS BASED ON SYMPOSIA
Symposium 1 – S2013
Time: 10.30 a.m. - 1.00 p.m.
Venue: KLAW 5
Chair: Dr. Stella Muhanji
Rapportuer: Mr. Ezra Rono
<table>
<thead>
<tr>
<th>Time</th>
<th>10.30 a.m. - 1.00 p.m.</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Monica Kangogo &amp; Maina Faith (University of Eldoret, Kenya)</td>
<td>B2013-28 Factors Affecting Extension Services and Favourable Extension Methods that can Ease Extension Shortage in Kenya: A Case Study of Uasin Gishu County</td>
</tr>
<tr>
<td></td>
<td>Jackson Oyaro Ongeta (University of Eastern Africa, Baraton)</td>
<td>B2013-29 Influence of Investment Behaviour on Financial Performance of Individual Investors of Stocks Listed at Nairobi Securities exchange in Nakuru County</td>
</tr>
<tr>
<td></td>
<td>Samwel Kiptoo Bett (Kirobon Girls High school)</td>
<td>B2013-32 Strategy Alignment with Value Chain for Sustainable Growth in Technology Related Industries</td>
</tr>
<tr>
<td></td>
<td>1 pm to 2 pm</td>
<td>Lunch Break &amp; Exhibitions</td>
</tr>
</tbody>
</table>

Symposium 2 – S2013

**Time:** 10.30 a.m. - 1.00 p.m.

**Venue:** KLaw 1

**Facilitator:** Mr. Philip Ragama

**Rapporteur:** Mr. Peter Rugiri

<table>
<thead>
<tr>
<th>Time</th>
<th>10.30 a.m. - 1.00 p.m.</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Madaraka F. Mwema, Joseph Wanyonyi (Dedan Kimathi University)</td>
<td>S2013-10 Maintenance Optimization Models for Steam Turbines: A Case Study at Olkaria Geothermal Power Plant</td>
</tr>
<tr>
<td></td>
<td>P. W. O. Nyawere (Kabarak Univ), N.W. Makau and G.O. Amolo (University of Eldoret)</td>
<td>S2013-17 Ab initio Calculations of the Electronic and Mechanical Properties of Orthorhombic Phase of BaF2</td>
</tr>
<tr>
<td></td>
<td>Madaraka F. Mwema, Kimayu S. Musau, Wanyonyi J. Muyundo (Dedan Kimathi University)</td>
<td>S2013-21 Performance analysis on typical homemade biomass powered cereal drier</td>
</tr>
<tr>
<td></td>
<td>Michael Juma Saulo, (Technical University of Kenya)</td>
<td>S2013-29 Impact of Auxiliary Service Voltage Transformer on Power Networks</td>
</tr>
<tr>
<td></td>
<td>Koima J.K (Kabarak Univ), Nasiuma D (International Univ.), &amp; Mwita P (JKUAT)</td>
<td>S2013-30 Volatility Estimation of Stock Prices Using Garch Method</td>
</tr>
<tr>
<td></td>
<td>1.00 pm – 2.00 pm</td>
<td>Exhibition / Lunch Break</td>
</tr>
</tbody>
</table>

Symposium 3 E2013

**Time:** 10.30 a.m. - 1.00 p.m.

**Venue:** KLaw 4

**Chair:** Dr. Moses Alela
Rapporteur: Dr. Betty Tikoko

<table>
<thead>
<tr>
<th>Time 10.30 a.m. - 1.00 p.m.</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daniel Otieno &amp; Eric Osoro (Africa Nazarene University)</td>
<td>E2013-49 Blended Learning in Higher Education: Learners’ Preferences and Insights</td>
</tr>
<tr>
<td>Edward Nzinga</td>
<td>E2013-51 An Assessment Of The Management And Access Of Adult Education in Machakos County</td>
</tr>
<tr>
<td>James Kay (Kabarak University)</td>
<td>E2013-56 Study Engagement and Academic Burnout in University Students</td>
</tr>
<tr>
<td>Sheila Munanie Kilonzi and Hudson Wakaba Ndegwa (Karatina University, Kenya)</td>
<td>E2013-57 Preconception and Prenatal Care among Women of Reproductive Age: A Case of Kigumo District, Murang’a County</td>
</tr>
</tbody>
</table>

1.00 pm – 2.00 pm          Exhibition / Lunch Break

Symposium 4 L2013

Time: 10.30 a.m. - 1.00 p.m.

Venue: Senate Boardroom

Chair: Mr. Charles A. Khamala

Rapportuer: Ms. Caroline Cherotich

<table>
<thead>
<tr>
<th>Time 10.30 a.m. - 1.00 p.m.</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peter Kirui (Karatina Univ.) &amp; Benedict Toroitich (The Catholic University of Eastern Africa)</td>
<td>L2013-06 Demystifying Devolution under Kenya’s New Constitution: The Need to Avoid Pitfalls</td>
</tr>
<tr>
<td>Margaret S. Maringa(Ngaru Ramo Farm, Kerugoya, Kenya)</td>
<td>L2013-07 Effective Gender Empowerment For Kenyan Women</td>
</tr>
<tr>
<td>Edwin Wangoli Wanjawa, (Pwani University, Kilifi)</td>
<td>L2013-08 Whence Devolution and County Governance in East Africa: An Analysis of Governance Best Practices in Selected Local Authorities in the East African Community Countries</td>
</tr>
<tr>
<td>Nicodemus Aketch Ishmael, (Multimedia University of Kenya)</td>
<td>L2013-09 Effects of Intellectual Property Rights (IPR) in the Information Society</td>
</tr>
</tbody>
</table>
Kabarak University 3rd Annual International Conference - Programme & Book of Abstracts

Julius Kirui Sholle (Moi University, Kenya) L2013-10 Investigating the Legal Implications on Wetlands Management in Kenya

Rodgers Koima and Joseph K. Karanja L2013-11 Formulation of a procurement policy on the East African States

1.00 – 2.00 LUNCH BREAK AND CLOSING OF CONFERENCE

CONTENTS

BOOK OF ABSTRACTS......................................................................................................................25

STUDENT EXHIBITIONS......................................................................................................................25
Ex2013-01 Marine Green Algae Lubricating Oil (Mgalo) and Biofertilizer.....................................25
Ex2013-02 Aligning Virtual Learning Technology Engagement and Economic Development – a case of inside campus...............................................................25
Ex2013-03 An Exhibition on Ambidexterity in Artistic Display......................................................26
Ex2013-04 Conference Facility Hiring System (cfhs)......................................................................26
Ex2013-05 The Perceived Impact of Pediatric HIV Positive Status Disclosure.........................27
Ex2013-06 Automated Grass Cutter and Hedge Trimmer...............................................................27
Ex2013-07 Remote Sales Monitoring System................................................................................28
Ex2013-08 The preferred mobile service provider........................................................................28
Ex2013-09 Factors affecting choice in mobile phone selection in Kenya:
Case Study Kabarak University....................................................................................................29

MAIN CONFERENCE ABSTRACTS........................................................................................................29

B2013 SYMPOSIUM I - BUSINESS........................................................................................................29
B2013-01 Effect of Income and Provision of Physical Facilities on Students Performance in Kenya: A Case of Nakuru County..............................................................29
B2013-02 Employee factors on the implementation of ISO 9001: 2008 certifications in University of Kabianga..............................................................29
B2013-03 Determinants of Loan Repayment in Microfinance for Water Program of K-Rep Bank, Kenya..........................................................................................................................30
B2013-04 Factors Influencing Employee Participation in Corporate Social Responsibility at Telkom Kenya: A Case Study of Telkom Kenya.................................................................30
B2013-05 Role of Training Record Management Systems on Organisation Learning in the University of Kabianga........................................................................................................31
B2013-06 Factors Influencing Employee Participation in Corporate Social Responsibility at Telkom Kenya: A Case Study of Telkom Kenya.................................................................30
B2013-07 The Use of Linear Programming in Land Use Planning Strategies for Increased Food Crop Production.................................................................31
B2013-08 Kenyan Dry Cell Battery Manufacturers Strategies Gain Competitive Advantage: A Case Study Of Eveready East Africa Limited.................................................................31
B2013-09 A Survey Of E-Recruitment At Tea Industries In Kericho..............................................31
B2013-10 Investigating the Legal Implications on Wetlands Management in Kenya....................32
B2013-11 The Use of Linear Programming in Land Use Planning Strategies for Increased Food Crop Production.................................................................31
B2013-12 Technology Adoption in Rural Areas for Sustainable Development.............................32
B2013-13 Regional Integration and Trade in Sub-Saharan Africa: An Analysis..............................32
B2013-14 Technology Adoption in Rural Areas for Sustainable Development.............................34
B2013-15 A Survey Of E-Recruitment At Tea Industries In Kericho..............................................32
B2013-16 Linkages and the Performance of Livestock Farming. A Survey of Small scale Livestock Farmers in Kerio Valley-Baringo County.................................................................35
B2013-17 Factors influencing Effective Outsourcing of Information Technology in Private Educational Institutions in Kericho County.................................................................35
B2013-18 The Role of Board Complexity in the Financial Performance of Commercial Banks in Kenya........................................................................................................36
B2013-19 Traditional and Modern Governance Institutions:
Can they Corporately Work for Efficient Services in Contemporary Kenya?.................................................................36
B2013-20 Corporate Governance and the Value of Selected Firms Quoted at the Nairobi Stock Exchange........................................................................................................37
B2013-21 Effects of Employee Incentives to Employee Performance in Private Universities in Kenya: A Case Study of Kabarak University.........................................................38
B2013-24 An Evaluation On The Management Of High Altitude Training Camps In Kericho County, Kenya............................................................................................................39
B2013-25 Sports As Emerging Economies And Regional Development .................................................................................................................................39
B2013-26 The Role of State and Non-State Actors in Peace-Building in Mt Elgon Region.................................................................39
B2013-27 Factors Influencing Labour Turnover in Fuel Service Stations:
A case of Nyahururu Town.................................................................................................................................40

E2013 SYMPOSIUM 2 – EDUCATION.................................................................................................................................41
E2013-01 Factors Influencing the Participation of Women in Distance Education: A Case of Kenya Methodist University........................................................................................................41
E2013-02 Pure And Applied Science For Vision 2030.........................................................................................................................42
E2013-03 Factors Influencing Academic Performance in Urban Informal Settlements in Kenya: A Case Study of Public Primary Schools Of Kibera Slums, Nairobi County.........................................................42
E2013-04 Anaysis of High School Drop Out Rates in Nyandarua County.................................................................................................43
E2013-05 The Role Of Private Primary Schools In Providing Education In Mbale Municipality In Uganda.................................................................................................................................44
E2013-06 Communication Impairments And Knowledge Acquisition.................................................................................................................................44
E2013-07An Evaluation on the Management of High Altitude Training Camps in Kericho County, Kenya.................................................................................................................................44
E2013-08 The Perceptions of Believers on an Effective Church Leader: A Study Of Selected Churches From Naivasha Location........................................................................................................45
E2013-09 Assessment of Ict Integration into Instruction in Teacher Education Institutions In Kenya.................................................................................................................................45
E2013-10 Communication and Maternal-Child Health Promotion.................................................................................................................................46
E2013-11 Drop Out Among Pupils In Rural Primary Schools In Kenya: The Case Of Nandi North District, Kenya.................................................................................................................................47
E2013- 12 Factors Contributing to Increased Indiscipline in Secondary Schools in Kenya....47
E2013-13 Institutional Factors Influencing Teacher Turnover in Secondary Schools in Baringo County, Kenya .................................................................................................................................48
E2013-14 Role Of Information Communication And Technology (Ict) In Promoting Inclusive Education Of Learners With Visual Impairement In Public Universities In Kenya.................................................................................................................................48
E2013-16 Ict and The Church: Role of Ict in Evangelism.................................................................................................................................49
E2013-17 Hair: A Samburu Identity Statement.................................................................................................................................49
| E2013-19 | The Revolution of the African Gulags................................................................. | 49 |
| E2013-21 | Journalism in Times of Change: An Exploration of the Professional Identity of Kenyan Journalists................................................................. | 50 |
| E2013-22 | Relationship Between Factors Which Contribute To Teachers’ Job Satisfaction And Academic Achievement Among Secondary Schools In Homa-Bay County, Kenya................................................................. | 50 |
| E2013-23 | Rethinking Higher Education in Kenya: Energizing Complementarity Linkages between the Delivery and Transformative Contexts to Leverage Vision 2030................................................................. | 51 |
| E2013-24 | The Hawking Of University Education In Urban Centers In Kenya: Challenges and Way Forward................................................................................................................................................................................................. | 51 |
| E2013-25 | Impact of Guidance and Counseling Services in Selected Boarding Schools in Dagoretti Constituency in Nairobi County................................................................................................................................................................................................. | 52 |
| E2013-26 | Teachers’ Perception of their Workload and Perfromance in Kanduyi Division of Bungoma District, Kenya................................................................................................................................................................................................. | 53 |
| E2013-27 | Contraceptives- A Hex Or A Vex?: A Case Study Of Naivasha District................................................................................................................................................................................................. | 53 |
| E2013-29 | The Teaching of English Idioms in Kenyan Secondary Schools: Difficulties and Effective................................................................................................................................................................................................. | 54 |
| E2013-30 | Teachers’ Viewpoints on the Use of Ict in the Teaching of Languages in Kenya................................................................................................................................................................................................. | 54 |
| E2013-32 | Gender Based Barriers to Effective Education for Refugees in the Dadaab Complex, Kenya................................................................................................................................................................................................. | 55 |
| E2013-33 | Factors Influencing the Choice of Suitable Web-Based Learning for Distance Learners: The Case of Kenya Methodist University................................................................................................................................................................................................. | 56 |
| E2013-34 | The Impact of Caring and Involved Fathers on Child Behaviour: A Case of Street Children and Juvenile Delinquents in Nakuru County................................................................................................................................................................................................. | 56 |
| E2013-35 | Ethnic Stereotyping In Kenyan Television Comedy Shows: Harm or Humor?................................................................................................................................................................................................. | 57 |
| E2013-36 | The Provision of Free Education and its Impact on Quality – The Uganda Chapter................................................................................................................................................................................................. | 57 |
| E2013-37 | Non-Governmental Organizations’ (Ngos) Participation in Empowerment of Hiv/Aids Orphaned Children in Njoro District, Nakuru County, Kenya................................................................................................................................................................................................. | 58 |
| E2013-38 | Development-Induced Displacement: Analyzing the Impact of Displacement as a Result of the Proposed New Port in Lamu................................................................................................................................................................................................. | 58 |
| E2013-40 | Influence of Family Risks and Assets on Alcohol, Tobacco and other Drugs Behaviors among Secondary School Students in Kiambu and Nairobi Counties, Kenya................................................................................................................................................................................................. | 59 |
| E2013-41 | Mass Media and Society: More of Partners than Protagonists................................................................................................................................................................................................. | 60 |
| E2013-42 | Politics and Sensational Newspaper Headlines: Debate around Jubilee Government’s Laptops and the Teacher’s Strike?................................................................................................................................................................................................. | 60 |
| E2013-45 | An Assessment of Aerobics Exercises on Dancing Skills as a Performing Art in Nakuru Fitness Centers................................................................................................................................................................................................. | 61 |
| E2013-47 | The Role of Mass Media in Health Promotion in the Republic of South Sudan................................................................................................................................................................................................. | 62 |
| E2013-49 | Blended Learning in Higher Education: Learners’ Preferences and Insights................................................................................................................................................................................................. | 63 |
| E2013-50 | Blended Learning in Higher Education - Perceptions and Preferences................................................................................................................................................................................................. | 63 |
E2013-52 Evolving Role of Social Networking on University Education Performance in Kenya: A Case Study of Multimedia University of Kenya ......................................................... 64
E2013-53 Frequency of Nutritional Counseling Services: Does it have any Value on the Adherence to the Dietary Therapies among Diabetic Patients in Nakuru County? ........ 64
E2013-55 Stress Experiences and their Contribution to Students' Performance in Biology in Mixed Secondary Schools in Kiambaa Division of Kiambu County, Kenya ............ 65
E2013-56 Study Engagement and Academic Burnout in University Students ......................... 66
E2013-57 Preconception and Prenatal Care among Women of Reproductive Age: A Case of Kigumo District, Murang’a County ........................................................................ 67

L2013 SYMPOSIUM 3 - LAW ........................................................................................................... 67

L2013-01 Court Interpreters Accommodation Strategies in Kenyan Courtroom Communication: Evidence from Subordinate Courts in Nyanza Province .................. 67
L2013-02 Governance and Leadership ......................................................................................... 68
L2013-03 Causes of Kenyan Police Officers Extrajudicial Killings and Suicidal Tendencies ...... 68
L2013-04 Electoral Reform: Extinguishing Ethnic Hegemony in the Executive ....................... 69
L2013-05 Legal Education, Training and Research ...................................................................... 69
L2013-06 Demystifying Devolution under Kenya’s New Constitution: The Need to Avoid Pitfalls .................................................................................................................. 70
L2013-07 Effective Gender Empowerment for Kenyan Women ..................................................... 70
L2013-08 Whence Devolution and County Governance in East Africa: An Analysis of Governance Best Practices in Selected Local Authorities in the East African Community Countries .... 71
L2013-09 Effects of Intellectual Property Rights (IPR) in the Information Society ..................... 71
L2013-10 Investigating the Legal Implications on Wetlands Management in Kenya ................... 72
L2013-11 Formulation of a procurement policy on the East African States ............................... 72
L2013-12 WHY GREY? .................................................................................................................... 73

S2013 SYMPOSIUM 4 - SCIENCE ................................................................................................. 74

S2013-01 Survey of Diplostomum species (Digenea: Diplostomidae) infesting Nile tilapia (Oreochromis niloticus L.) in western Kenya ................................................................. 74
S2013-02 Assessment of the factors that influence Internet service providers in application of technology push strategy in Kenya: The Case of Jamii Telecom Limited .... 74
S2013-03 Heavy Metal Exposure To Residents Residing In Informal Settlement: A Case Study Of Residents In Nakuru Municipality, Kenya ............................................................. 75
S2013-04 Mobile Interactive Messaging System for Patients in Collaboration with Health Workers ..................................................................................................................... 75
S2013-05 Efforts towards Increased Forest Cover as a Measure to Mitigate Effects of Climate Change ............................................................................................................... 76
S2013-06 The Role of African Cultures in the Conservation of the Environment: A Philosophical Perspective ............................................................................................................ 76
S2013-07 M-Fcra: A Mobility-Aware Resource Allocation Scheme in Femtocell Networks .......... 77
S2013-08 Efficacy of three plant extracts in reducing sediment and heterotrophic bacterial load in surface raw water in Samburu District, Kenya ............................................. 77
S2013-09 Bacterial Risk and Contamination Level of Raw Drinking Water from Ground and Surface Water Sources in Wamba Division, Samburu District ................................ 78
<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>S2013-10 Maintenance optimization Models for Steam Turbines: A case study at Olkaria I Geothermal Power Plant</td>
<td>78</td>
</tr>
<tr>
<td>S2013-11 Factors Influencing the Intention to Use Location-Based Mobile Advertising among Micro-Enterprises</td>
<td>79</td>
</tr>
<tr>
<td>S2013-13 Evaluation of Mobile Social Software for Sustainable Development</td>
<td>79</td>
</tr>
<tr>
<td>S2013-14 Fraud vulnerability of Kenya’s National Identity Card System</td>
<td>79</td>
</tr>
<tr>
<td>S2013-15 Web Based Data Extraction For Information Retrieval</td>
<td>80</td>
</tr>
<tr>
<td>S2013-16 Integrated Approach: Truckers’ Parking Bay Facility, as Environmental Hazard in Salgaa “Wild West” Nakuru, Kenya</td>
<td>80</td>
</tr>
<tr>
<td>S2013-17 Abinitio Calculations of the Electronic and Mechanical Properties of Orthorhombic Phase of BaF2</td>
<td>81</td>
</tr>
<tr>
<td>S2013-18 Benchmarking of Undergraduate Computing Curricula in Kenya</td>
<td>81</td>
</tr>
<tr>
<td>S2013-19 Diatom Ecological Indicator Values in the Assessment of Water Quality in Three Rivers of Lake Victoria Catchments</td>
<td>82</td>
</tr>
<tr>
<td>S2013-20 Effect of Blue Background Light on Haematology and Plasma Biochemistry of Three Strains of Nile Tilapia (Oreochromis Niloticus Linnaeus) Fingerlings Exposed to Acute Stress</td>
<td>83</td>
</tr>
<tr>
<td>S2013-21 Performance Analysis on Typical Homemade Biomass Powered Cereal Drier</td>
<td>83</td>
</tr>
<tr>
<td>S2013-23 Impacts of Climate Change on Natural Resources and Gender: Adaptation Strategies among the Samburu Pastoralist Communities of Northern Kenya</td>
<td>84</td>
</tr>
<tr>
<td>S2013-24 Characterization of Seasonal Rainfall Variability and Drought Probability of the Semi-Arid Areas of Mbeere Region in Embu County, Kenya</td>
<td>84</td>
</tr>
<tr>
<td>S2013-25 Nucleon-Nucleon Interaction in Infinite Nuclear Matter</td>
<td>85</td>
</tr>
<tr>
<td>S2013-26 Ameliorating Melarsoprol Toxicity Using Kenyan Purple Tea Anthocyanins and Co-enzyme-Q10 in a Mouse Model</td>
<td>86</td>
</tr>
<tr>
<td>S2013-27 Kenyan Purple Tea Anthocyanins Ability Cross the Blood Brain Barrier</td>
<td>86</td>
</tr>
<tr>
<td>S2013-28 Productive Strategies of Making a Living out of Waste Plastic Bags: A Case of Kisii Town</td>
<td>87</td>
</tr>
<tr>
<td>S2013-29 Impact of Auxiliary Service Voltage Transformer on Power Networks</td>
<td>87</td>
</tr>
<tr>
<td>S2013-30 Volatility Estimation of Stock Prices Using Garch Method</td>
<td>88</td>
</tr>
<tr>
<td>S2013-33 Evaluation Of Termiticidal Properties Of Chemically Modified Cashew Nut Shell Liquid</td>
<td>88</td>
</tr>
</tbody>
</table>
BOOK OF ABSTRACTS

STUDENT EXHIBITIONS

Ex2013-01 Marine Green Algae Lubricating Oil (Mgalo) and Biofertilizer

Jiveri Bonface K, Mwasingo Rose W), Kahindo John M. and Matoka Charles M. 
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Culturing of algae as an alternative feedstock for biofuel production has received a lot of attention in recent years. Due to their fast growth rate and ability to accumulate high quantity of lipid and carbohydrate in cells, algae can be exploited for oil/Lubricants, biodiesel and bioethanol production. In addition, superior feedstock offers several environmental benefits, such as effective land utilization, carbon dioxide sequestration, self-purification if coupled with wastewater treatment plants. The technology does not trigger food versus fuel feud. Based on technological advances, the potential of algae towards energy security and its feasibility for commercialization are being explored. An attempt to extract oil from marine green algae through solvent extraction and production of organic biofertilizer (N:P:K substitute) from the resulting biomass was undertaken. The oil extracted from the algae was used to prepare oil/lubricant. The new dimension has the potential of revolutionizing the biofuel industry by providing an alternative source for fuel/oil sustainability. Lubricant/oil production was directed towards using aquatic algae for sustainance of the environment while using land that is not suitable for agriculture into aquaculture.

Key words: Biofertilizer, Lubricating Oil, Marine Green Algae

Ex2013-02 Aligning Virtual Learning Technology Engagement and Economic Development – a case of inside campus

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Economic development in the context of education is the practice and philosophy of generating measurable economic returns in communities through the institutions of learning engagement in the provision of education and learning for sustainability. Evidence suggests that the diffusion of knowledge from engaged institutions of learning promotes economic recovery through the creation of innovative and highly adaptive environments. This can lead to the economic revitalization of communities as creative incubators, employers and local investors. A learning economy that focuses on new knowledge is essential to the overall economic strength of a country, and therefore institutions of learning can lead the way by supporting innovative venture capital projects, advancing applied research, and encouraging campuses and communities to build on existing assets. Rapid development of computer networks and information technologies, especially the Internet and World Wide Web promotes electronic learning and distance education. Education programs delivery via virtual learning environments is a convenient form of education for learners who want to learn from home whenever they want. Virtual learning environments also provide unified information and knowledge sharing, enhances on campus pedagogic
innovations and organizational change, removes the stigma associated with learning, removes the learning barriers related to infrastructure, cost effective and acts as a means of revenue generation. This paper therefore seeks to present “Inside Campus” as a practical and functional electronic learning system. This will promote sustainable education development through knowledge and information sharing for the benefit of all particularly in view of the vision 2030. This will in turn improve the delivery of education programs to learners hence increase knowledge and skills acquisition essential for the overall economic development of a country.

**Ex2013-03 An Exhibition on Ambidexterity in Artistic Display**

Alvin Kubasu, alvinkubz@yahoo.com, Technical University of Mombasa.

Handedness is a vague term that does not have a fixed or agreed definition. Although the terms left and right are enough to define handedness in an ordinary disclosure, they do not suffice for scientific research. The scientific definition of handedness can be based on two theoretical assumptions. It can be defined as the hand that performs faster or more precisely on tasks or the hand that one prefers to use, regardless of performance between. There are four different types of handedness that include: left-handedness, right-handedness, mixed-handedness, and ambidexterity. **Right-handedness** is most common. Right-handed people are more dexterous with their right hands when performing tasks. A variety of studies suggest that 70–90% of the world population is right-handed. **Left-handedness** is less common than right-handedness. Left-handed people are more dexterous with their left hands when performing tasks. A variety of studies suggest that approximately 10% of the world population is left-handed. **Mixed-Handedness** is the change of hand preference between different tasks. This is common in the population with about a 30% prevalence. **Ambidexterity** is exceptionally rare, although it can be learned. A truly ambidextrous person is able to do any task equally well with either hand. Therefore this exhibit is based on ambidexterity. I will prove the ability of using both hands in equal measure to perform various tasks; the major one being artistic work and skillful writing. The presentation will be oral and visual arts display.

**Ex2013-04 Conference Facility Hiring System (cfhs)**

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A **conference facility hiring system** is web-based software that supports the management hiring of facilities used in conferences and any other event that may require conference-like facilities. It helps the organizers and the management to view the facilities available and to chair the conference. The projects’ main aim is to keep record of the facilities currently in use and those available to the clients who are yet to hire them and to increase its efficiency in that several clients can access them at concurrent times. The application is a web based developed using **MYSQL as the backend**. It will be used as the database for storing all the information which runs within the system. The application also uses **Hypertext Preprocessor (PHP)** which is a server-side scripting language used to produce dynamic Web pages and provide connectivity to the database. For User interface the application uses HTML language - Loose syntax which is supported by almost all internet browsers. It is also widely used and established on almost every website. JavaScript has also been used to make web pages more
interactive and dynamic and to provide validation. Lastly, the system provides printout outputs and enables viewing of invoices, receipts, statements and also reports. The System provides notifications on queries by clients and also those replied and the pending ones.

**Keywords:** Conference facility System, MYSQL, PHP

**Ex2013-05 The Perceived Impact of Pediatric HIV Positive Status Disclosure**

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The aim of this research is to determine the perceived impact on pediatric HIV status disclosure. HIV is one of the most feared diseases in Africa. It can be transmitted through exchange of blood or body fluids. The most common mode of transmission is through unprotected sexual intercourse. Children born of sero-reactive parents, acquire HIV infection from the mother during pregnancy or delivery by exchange of blood. This project, aims at determining the perceived impacts; both positive and negative, upon disclosing the child’s HIV status, either to the child or to the community at large. These impacts include: isolation, discrimination, excommunication and some of the children are also killed. On the positive side disclosure results to adherence to Anti Retroviral therapy, the child will be able to manage complications associated with HIV and the child can also join social groups which are helpful to them. In this paper, therefore, will evaluate and determine if the child is aware of their HIV positive status, if not aware, who should disclose this information to the child, at what age should the disclosure be made, and what are the perceived impacts upon disclosing this information either to the child or to the community at large. The output of this research can be applied in any family or community which is HIV infected or affected in our country Kenya. The research aimed at determining the perceived impacts of pediatric HIV positive status disclosure either to the child infected or community affected at large. The research was carried out in Kibagare village, Westland’s constituency, Nairobi County. Data was collected by primary method which entailed responding to questionnaires which had 17 closed ended questions. Study findings indicated that there was a lot of negative attitude and impacts upon disclosing the child’s HIV positive status to the child and also the community. Therefore, this research project can be used to sensitize family affected by HIV disease about the importance of disclosing this information (HIV positive status) to the child and the community. This will improve the child’s adherence to anti retroviral therapy, enable the child join social groups which are helpful to the and most importantly remove the stigmatization of HIV positive status disclosure from the community.

**Ex2013-06 Automated Grass Cutter and Hedge Trimmer**

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Lawnmower have been around for some time now of which their basic purpose is to trim grass to a standard size for neat compound, just like any machine it has its varieties example the hand held mowers, Walk-behind mowers. Hedge trimmers have been used in trimming the hedges around our compounds, stadiums to make compound look neat and orderly. This project aims at combining these basic ideas and coming up with one integrated machine. This automated grass cutter and hedge trimmer will comprise of one arm
that will be hydraulically auto steered by the machine itself, it will have the capability of auto steering itself around the compound with the help of improvised coordinate system, and it will also have a remote control and manual push where the owner can drive it. The ground will be fitted with coordinate system that will have multiple purpose of (1) moisture measuring device to measure water content in the soil, below a given level execution command of watering pump is given (2) laser jets that will measure the height of the grass, when their communication is hindered an execution command is applied. The device will be solar powered.

**Ex2013-07 Remote Sales Monitoring System**
Kirui K. Julius, E-mail: julikirui@live.com, Kabarak University

Remote Sales Monitoring System (RSMS) is a web based application which is designed using CodeIgniter (PHP Frameworks for connecting to database), HTML and CSS for user interface and MSQL for database. The system has three user roles defined by the system namely; System Administrator, Manager and Clerk. RSMS is used to keep record of all the sales made and the products (Stock) of a business. The owner/Manager of the business is able to monitor the progress of the business remotely. The system therefore brings business “close” to the owner/manager thus reducing cost of management even when several business branches exist. The system generates reports/data on product volume sales and keeps track of the stock. It can thus be use as a source of information to place orders as per customer demands. RSMS provide a platform where the system users can exchange information by sending messages to each other hence reducing the cost of making calls. The system is capable of keeping track of the products, suppliers and customers. It secures the business from selling products which are not authorized in the business and also keeps record product prices. Only authorized personnel can adjust the prices of goods. The system provides monitoring of system users in terms of login time and logout and is user friendly and simple.

**Ex2013-08 The preferred mobile service provider**
Humphrey N. Githu, Peter Salema, Samuel N. Barechi, Dennis Kulvinder, George Kaloki, Kabarak University

Mobile phone service provider markets are one of the most unstable market atmospheres, now a day due to increased competition and change in the market. Thus, the growing concern requires the marketers to strictly look at customer buying decision and satisfying process and more focus on the factors such as Prices, Perceived quality, Perceived sacrifice, Perceived value, and Purchase intention that subsequently determine willingness to purchase between different mobile phones and networks. On this basis, this research deals with consumers’ sacrifice and willingness to purchase criteria in mobile phone service providers markets by studying factors that influence customer perceived value and satisfying Intention to acquire new mobile phones on one hand and factors that influence on mobile network change on the other hand. It was found that although the willingness to measure satisfaction by customer on mobile service providers is a subjective choice situation, there are some general factors that seem to guide the willingness to buy. The study shows that while technical problems are the basic reason to change mobile phone & network among consumers, prices, brands, interface, and properties are the influential factors affecting the actual choice among brands. Overall profiling of customer is also done to find out the requirement of customers. In addition, the results show customers sensitively emphasize on prices but sacrifice and also less willing to purchase mobile phone & satisfying. Accordingly, it is useful to consider the age, gender, income, and education of consumer’s to predict consumer satisfaction more precisely.
Factors affecting choice in mobile phone selection in Kenya: Case Study Kabarak University

Peter Salema, Samuel Ndiwa Barechi, Dennis Kulvinder, George Kaloki, Kabarak University

Mobile phones have a vast presence as of the start of the millennium, and have a great significance on the user’s daily life. Mobile phones have been our choice of study due to their need in everyday life. This paper focuses on the factors consumers consider when choosing mobile phones. A quantitative study drawing data from 300 random people from Kabarak University was employed. The principal components factor analysis resulted in six independent dimensions: (1) innovative features, (2) image and brand, (3) cost, (4) personal recommendation, (5) cell phone technology and, (6) single SIM and Dual SIM. The top three most important factors influencing consumer choice of mobile phones are: innovative features, price and original.

Effect of Income and Provision of Physical Facilities on Students Performance in Kenya: A Case of Nakuru County

Kamau John Gathii, E-mail: kamaujohngathii@gmail.com & Phillip Ragama, Kabarak University

Like any other business, schools require input of resources in order to deliver their mandate. Unlike other businesses the provision of education has other factors that are likely to interfere with the delivery and implementation of the teaching curriculum. Whether income and provision of physical facilities affect the delivery of the curriculum materials still remain largely unconfirmed. The aim of this study was to determine this relationship. All the schools in Nakuru County were identified. The county was stratified into seven districts and the schools were stratified into public and private schools. This formed the population of this study. A sample of 33 schools was randomly selected. Questionnaires and a school observation guide were administered to the Head teacher, the bursar, and the researchers filled the observation guide with the help of a member of staff. The data collected was analyzed using correlation, regression and chi square to determine if there was any relationship. The major findings were that, the income has a profound influence on performance contributing about 63% with the physical facilities contributing less than 33%. Our recommendation is that the schools supervising authority endeavor to ensure that school income is not spent mainly in provision of physical facilities. The government also needs to come up with prioritization rules to act as a guide to what the schools should procure when.

Employee factors on the implementation of ISO 9001: 2008 Certifications in University of Kabianga

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University of Kabianga embarked on ISO 9001:2008 certifications in 2010 in line with market trends and
as a customer/suppliers satisfaction strategy and was awarded the certificate in August 2012. Success and sustenance of the quality management programme is dependent on the employee factors. The aim of this study was to examine the perception and expectations of employees on the implementation of ISO 9001:2008 certification. This paper also aimed at identifying the main obstacles of the ISO 9001:2008 implementation. Simple random sampling technique was used to come up with representative sample. The study was carried out by collection of primary data through a self-administered, structured questionnaire with closed ended questions to a sample of 150 respondents out of the Kabianga university employee population of 410. The study adopted a survey research design. Statistical Package for Social Science (SPSS) was used for ease of analysis. The study found out that employee factors (perceptions and expectations) play a vital role on ISO9001:2008 certification and the maintenance of quality management in an organization. It was also evident that there are obstacles in the implementation of ISO certification. The findings are of great importance to the ISO 9001:2008 certified organizations as well as those who are in the process of attaining it.

**B2013-03 Determinants of Loan Repayment in Microfinance for Water Program of K-Rep Bank, Kenya**

Kibet Joshua Kiprop, Jomo Kenyatta University of Agriculture and Technology

Despite growing international attention to global safe-water access, investment in adequate safe water products and services in developing countries remains low. Over 3-billion people are estimated to lack reliable access to clean piped water, resulting in 1.7 million deaths annually in developing countries. In Kenya, only 3.7 million people representing 12% of the rural population are served by piped water connection. Microfinance has been identified as a potential strategy to bridge funding gap within water and sanitation sector among the poor. K-Rep Bank and the World bank piloted Microfinance for Water Program in 2006, aimed at providing small loans to community water projects in rural and peri-urban areas in Kenya to set up and water supply infrastructure. Loan repayment status of the program was not clear and its sustainability remains doubtful. The aim of this study was to establish the key determinants of loan repayment in the program. This was a cross sectional of 33 water projects financed through the program. Data on their financial performance was extracted from K-Rep database while interviews were conducted with committees on socio-economic factors. Multiple logit regression was used as inferential statistic to determine significant determinants of loan repayment. Findings showed that 73% of the water projects were repaying their loans while 27% were not. Cash-flow (p>0.043) and female gender representation in management of projects (p< 0.0756) were key determinants of loan repayment in the program. Projects in high poverty incidence were better in loan repayment as compared to those in low poverty constituencies. The study therefore suggests that Microfinance can be an important strategy to finance household connection to water and sanitation for the poor in Kenya.

**B2013-04 Factors Influencing Employee Participation in Corporate Social Responsibility**

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Employee engagement and participation has been acknowledged as a key driver of shareholder value in a firm. There has been increased argument for firms to become more ethically and socially responsible in order
to attract great talent. These people want jobs where they can be intellectually challenged, but they prefer positions in organizations that demonstrate a set of socially responsible values. This study was aimed at providing insights to factors that influence employee participation or lack of it, in corporate social responsibility programs. The study took a case study design and data was collected by the use of questionnaires. Data analysis was done through descriptive analysis. Quantitative data including correlation was analyzed using Statistical Program for Social Scientist (SPSS). The results showed that financial rewards are very important as a motivating factor. Improved service delivery means more satisfied clients. When clients realize improved relationship with the organization, they can be the best marketers, when they pass word to others about the services offered. The study took a case study design and the target population was the employees of Nation Media Group, Nakuru. Salary is very important to their participation. It is therefore important to enhance job security through provision of friendlier working conditions, better reward packages and providing all employees with information regarding activities of the company to enable them take part.

Key Words: Corporate Social Responsibility, Stake holders, Organizational Culture, Employee involvement

**B2013-05 Role of Training Record Management Systems on Orgarnisation Learning at Telkom Kenya: A Case Study of Telkom Kenya**

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The overall performance of any organization depends upon the extent to which human resource is effectively developed and utilized. Previous research indicates that inefficient Human Resource Management practices reduce employee’s satisfaction towards their organization and ultimately affects their commitment to the organization. This study is aimed at investigating, analyzing, and providing insights of the role of Training record management systems on Organisation learning at Telkom Kenya. The study adopts a case study design in order to undertake a comprehensive enquiry. For the purpose of this study the target population was drawn from Telkom Kenya. The researcher was restricted to the human resource department in the headquarters used a census study since the total population of items under study consisted of 14 employees and hence manageable. Like other telecommunication firms, Telkom faces the challenge of rapidly evolving and dynamic market needs and technology trends. To cope with these challenges it is necessary to retain and develop skilled workers in the organization by effective, efficient individual and organizational learning trends. Technology acceptance and adoption theories, Unified Theory of Technology Acceptance, Model of Training record management systems effectiveness, and Model of Training record management systems success were used. Primarily data was collected through questionnaires. Secondary data sources included; books, magazines and journal articles. Data analysis was done through descriptive analysis and inferential by use of SPSS Statistical Package version 21.0. The results of this study indicated that TRMS plays a major role in training records management, competency management and integrated database management which are all necessary for strategic decision-making purposes. The researcher thus, concluded that TRMS plays a major role in organization learning at Telkom Kenya. The researcher recommends the HR function can customize the systems in order to improve efficiencies, and develop capabilities that lead to new sources of value creation.
B2013-08 Kenyan Dry Cell Battery Manufacturers Strategies Gain Competitive Advantage: A Case Study Of Eveready East Africa Limited

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The Kenyan business environment is constantly changing; it is complex, dynamic, and largely unpredictable. This poses a great challenge to business communities in Kenya, who suffer from unfair competition in this liberalized market. In view of the above, this study sought to establish the strategies used by dry cell battery manufacturers in Kenya to gain competitive advantage. The objectives of the study were: to determine whether product innovation as adopted by dry cell battery manufacturing companies in Kenya helps them to gain competitive advantage; to establish whether technology in dry cell battery manufacturing companies in Kenya assists them to gain competitive advantage; and to examine whether competitor analysis as done by dry cell battery manufacturing companies in Kenya enables them to gain competitive advantage. A target population of 250 was used. The researcher objectively carried out a systemic random sampling from each of the groups that was to be issued questionnaires. The firm was divided into four main strata, that is: senior management, middle level management, first level management, and junior staff. The researcher used semi-structured questionnaires as the primary data collection tool. The data was finally coded and analyzed by use of statistical packages for social science (SPSS). The study established that product innovation, technology, and competitor’s analysis not only complement each other but also influence competitive advantage. The study has recommended more venture into development of existing and new product, innovation technology, strategic licensing out, and highly consideration of securing government loyalty, among other recommendations.

B2013-09 A Survey Of E-Recruitment At Tea Industries In Kericho

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Online recruitment is one of the newest recruitment tools at the disposal of employers. The term online recruitment or internet recruiting implies the formal sourcing of job information online. Increasingly the employers are recognizing the value of internet as a means of communicating with potential applicants. This study sought to determine the extent to which tea industries with case studies of Kenya Tea Packers, (KETEPA), Unilever Tea (K) and James Finlay (K) Ltd have adopted electronic recruitment. The study used both qualitative and quantitative techniques. Simple random technique was used to select the employees that were included in the sample. Data was collected mainly through questionnaires and interviews. Both inferential and descriptive statistics were adopted in data analysis. The researcher found that all the tea industries under survey used the internet for recruitment of staff.

B2013-11 The Use of Linear Programming in Land Use Planning Strategies for Increased Food Crop Production

Koech Ronald* Pwani University, Donald Ogweno, Moses ImoMoi University, Paul Oduor,University of Eldoret, Chepneg'eno Winrose, Moi University.

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Land is the main asset in agricultural production and generally, limited availability of productive land is a major
constraint to increased agricultural production and by extension food and nutritional security. The main feature of Kenya’s agriculture is domination by small-scale farmers who account for over 75% of total agricultural production. Production is carried out on small land holdings averaging 2-3 hectares. Due to increasing population pressure on agricultural land, plantation forest under the plantation establishment and livelihoods support (PELIS) formerly Shamba System, has been an effective method of providing land to landless forest neighboring farmers. However there has been a concern that the system leads to destruction of forests through inadequate supervision by the Kenya Forest Service. This study therefore aimed at examining the benefits of this system of forest plantation establishment. Data on farming costs, revenue and socio-economic conditions were collected from the farmers. Net present value approach was used in investigating the financial benefit of the scheme to the forestland farmers. Linear programming crop-and-area allocation model was developed for examining ways of optimizing food production and income from the forest over a 30 – year period. Results show that system has a positive net financial return. The results suggest that the system is a viable activity and is of benefit to forestland farmers. If well implemented it will meet the twin objectives of food security and forest plantation establishment.

**Keywords:** Linear programming, Food security, Forestland farmer.

**B2013-12 Effects of Lean Production on Organizational Performance: A Case Study of Unga Limited. Nakuru**

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Global competition in business has forced most production sectors to realign their strategies so as to have competitive advantage. At Unga limited, the problem of a broad production has been in place for quite a while, and as advanced technology takes its roots in Africa, there has been an increasing demand for quality output by the industry, which can be achieved through effective adoption of the various production systems. The paper sought to assess the effects of lean production on organizational performance. The study was designed to examine the utility of total quality management system and just in time approaches as a problem solving approach, and the extent to which these quality systems are applied in the management of inventory in the organization. The study adopted a descriptive and inferential statistics research design. Data was analyzed through qualitative and quantitative approaches. From the response rate, the study found out that improving the management style and involving all the employees at all levels, as well as better inventory management, all leads to a more efficient practice of lean production. It also pointed out that material management and physical distribution are positively related, and therefore, critical determinants of successful lean production practice within the organization. The study concludes that firms should adopt the use of lean production system as a means to improved performance. The findings of the study will benefit future scholars and researchers to continually improve quality and reduce on wastes hence improving organizational performance.

**Key Words:** lean production system, total quality management, just in time, inventory management system, material management.
**B2013-13 Regional Integration and Trade in Sub-Saharan Africa: An Analysis**

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The study focuses on Regional Integration and Trade in the Sub Saharan Africa. It covers the Sub Saharan Region as the Universe. Sub Saharan Africa was chosen as a suitable area because even in the 21st century, this part of Africa is still considered underdeveloped and fully dependent on donor funding from developed countries. The research is a desk which draws heavily from previous research studies: Reports from government ministries and departments such as Ministry of Finance, Trade and Industry within Sub Saharan Africa, Institutional Reports from the World Bank,(WB) International Monetary Fund(IMF) and Central Banks among others. The study adopts descriptive research design. Descriptive statistics have been used in data analysis and presentation as a methodology suitable for document analysis and data presentation for secondary data in this study. The research established that there is the evidence of trade Liberalization, and that there is advancement of towards Economic growth. It also showed that sub Saharan Africa composes of small economies. There exists globalization as a supplement towards global integration and a presence of trade blocs. From the findings, it is recommended that the regionalism be embraced and that it cultivates comparative advantage among Sub-Saharan Africa. Competition among Sub- Saharan Africa countries be allowed and also there will be need for harmonization of SSA government policies.

**Key Words:** Globalization, Trade, Integration, Regional, Bilateral, Economies

**B2013-14 Technology Adoption in Rural Areas for Sustainable Development**

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The Kenya vision 2030 aims at making Kenya a newly industrialized, middle-income country providing a high quality of life to all its citizens by the year 2030. The vision places a lot of importance to issues of equity, wealth creation and opportunities for all citizens. The economic pillar aims at ensuring prosperity for all Kenyans while the social pillar seeks to build a just, cohesive and equitable society. This calls for approaches whose target is economic and social empowerment for the majority of Kenya citizens who live in the rural areas. According to World Bank statistics, in year 2012, 76% of the Kenyan population was estimated to be residing in the rural areas. The Kenya Bureau of Statistics report on wellbeing in 2005/6 noted that poverty is still largely a rural phenomenon, with the prevalence of absolute poverty in rural Kenya at 49.1%. It has also been observed that Gender inequalities as well as economic marginalization of women and the youth are rampant in the rural areas in Kenya than in urban areas. This paper demonstrates that technology adoption in rural areas is the way to promote economic and social empowerment and consequent contribution to the attainment of vision 2030. The paper uses case methodology approach to espouse the role of the technology adoption in rural areas through organized groups to address perennial problems of unemployment, low income, high levels of poverty, food insecurity, and the exclusion of youth and women in social and economic activities in the society. The paper recommends that deliberate efforts should be expended to promote and incorporate technological inventions and innovations in everyday activities especially in the rural areas where the majority of Kenyans reside. Through
technology adoption a high quality of life to all citizens shall be realised as aimed in Kenya vision 2030.

**Key Words:** Innovation, Inventions, Technology, Sustainable development

**B2013-16 Linkages and the Performance of Livestock Farming. A Survey of Small scale Livestock Farmers in Kerio Valley-Baringo County**

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The Kenya vision 2030 is based on three pillars: Economic pillar aims to improve the prosperity of Kenyans through economic development programmes, covering all the country, with an average GDP growth rate of 10% per annum beginning in 2012, (Kenya Vision 2030, 2007). Kenya has a national poverty level standing at 45.9% (World Bank, 2011). The government has initiated strategies of enhancing enterprise development to address such problem. Research shows that approximately 30% of Small and Micro Enterprises (SMEs) don’t celebrate their third year due to the various challenges (G.O.K, 1999). By creating linkages within local or even national economies, the smallholder livestock farmer may identify new opportunities, access business information and assemble necessary resources hence sustaining their small enterprises. The purpose of this study was to determine the linkages undertaken by small livestock farmers in Kerio Valley. The study was based on stakeholder’s theory by Cohne and Levinthal (2000), which states, “an organization could be most usefully regarded as “a coalition” where the management should identify all those groups whose support is necessary for the continued prosperity of the enterprise”. Simple random sampling with proportionate stratification was used in data collection. A structured questionnaire by way of interviews was administered to a representative sample of 67 small-scale livestock farmers. Data was collected on types of linkages, frequency of links and function of various link structures. This information was processed, analyzed and study hypotheses tested with Chi-square at 0.05 level of significance. Findings showed a significant association between effective linkages and small scale livestock performance. It is recommended therefore that agricultural stakeholders such as KARI should design packages that suit the livestock farmers, incorporate small-scale livestock farmers in identifying their own problems and solution and need for adaptive research to ensure that information gotten is suited to local circumstances.

**Key Words:** Small and Micro Enterprises (SMEs), Linkages, Enterprise Development, Economic Development and Coalition

**B2013-17 Factors influencing Effective Outsourcing of Information Technology Services in Private Educational Institutions in Kericho County.**

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The main aim of the research project was to determine the extent of the factors affecting successful ICT outsourcing, benefits and problems associated with outsourcing at sampled private educational institutions in Kericho County. The study is of particular importance to the education sector (and other sectors) as it serves to determine the critical success factors and best practices of ICT outsourcing. The target population of the study was 40 private educational institutions ranging from primary to tertiary levels. Stratified random sampling technique was used to extract a sample that was proportionate to the target population. The survey design was quantitative in order to determine both key thematic issues and aggregate levels of performance to achieve the
study objectives. A 5 point Likert-scale was applied to determine the degree of agreeability with statements related to the variables under study. The finding showed that most of the ICT services are outsourced to a low extent for instance procurement services, training services, installation services, application services and systems operation. The ICT service that is highly outsourced software maintenance and the benefits of outsourcing are cost reduction, acquisition of technology and improvement of performance. The constraints identified includes loss of control, fear of staff losing their jobs, vendor becoming competitors, lack of internal coherence and lack of innovation. The reasons for outsourcing include reduction of organizational problems, improving quality of ICT, increased access to new technology, obsolescence risk, client-vendor relationship, management factors and economic factors. The recommendations are that he educational institutions in Kericho county need to outsource non-core services relating to ICT, train and brief their staff on the benefits of outsourcing and encourage innovations, develop rules and regulations governing vendor relationship, and that management should look at the social and psychological factors when outsourcing. It is conclusive that institutions outsource ICT services to a low extent and decisions to outsource lies with the management and the administration. There are both benefits and constraints to ICT outsourcing.

**B2013-18 The Role of Board Complexity in the Financial Performance of Commercial Banks in Kenya**

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This paper is based on investigation of whether board complexity has influence on financial performance of commercial banks in Kenya. A descriptive and exploratory research design was utilized. A sample size of 187 directors was chosen. 139 questionnaires out of 187 were returned. Regression models were applied to examine the role of board complexity on financial performance of commercial banks. The results show a positive relationship between board complexity and financial performance of commercial banks in Kenya.

**B2013-19 Traditional and Modern Governance Institutions: Can they Corporately Work for Efficient Services in Contemporary Kenya?**

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The Government of Kenya recently introduced a new system of local governance, involving devolution of power to County Levels. The 2013 Elections produced new leaders throughout the country, and County governments structures are now in place. An elected governor now runs a county with the support of Senators and County Officials. Although many details still need to be worked out, this is one of the most fundamental changes of governance in Kenya since independence in 1963. For the new system to work and respond to the needs of local communities, the county management needs to be strengthened and effective ways for county representatives and local government staff to work with local communities established. In the wake of these changes, Kenyans have high expectations for reformed governance. It is hoped that such governance shall articulate values of transparency, accountability, quality leadership and prepare society to successfully reach its collective goals. This paper results from a comparative study conducted under the consultancy of the author on Traditional Governance Institutions TGIs between the periods; November 2012 to February 2013. The study was an initiative by the Kenya Transition Initiative Land Governance and Leadership Accountability Program that targeted those indigenous communities living in the Coastal region.
(counties) of Kenya, with an exception of Mombasa County. The study used a combination of quantitative and qualitative research methods for secondary and primary data acquisition. The study explored on the potential role TGIs have been playing in society and may play in the new constitutional dispensation. It is hoped that the output shall be utilised in constructing integrated governance structures; develop rigorous cross-bred policies that could accelerate in the application of reforms and promote responsible leadership.

**Key Words:** Traditional Governance Institutions, Traditional Governance Structures, Democratic/Modern governance, New Constitutional dispensation

**B2013-20 Corporate Governance and the Value of Selected Firms Quoted at the Nairobi Stock Exchange**

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This study looked at the effects of corporate governance on the value of firms quoted at the Nairobi Stock exchange in Kenya value of the firm. The objectives of this study were: To determine the level of adoption of the measures of corporate governance by the companies quoted at the Nairobi Stock Exchange, To determine the effect of board accountability on value of the firms quoted at the Nairobi Stock Exchange, determine the effect of financial disclosure and internal control on value of the firms quoted at the Nairobi Stock Exchange, determine the effect of shareholders rights on value of the firm, determine the effect of remuneration on value of the firms quoted at the Nairobi Stock Exchange, determine the effect of market for corporate control on value of the firms quoted at the Nairobi Stock Exchange and to determine the effect of corporate behavior on value of the firms quoted at the Nairobi Stock Exchange. The study adopted diagnostic research design, a sample of 49 quoted companies were selected through stratified and purposive sampling designs, both primary and secondary data were used for the purpose of this study. Primary data was collected by use of the questionnaires while secondary data was collected by use of a schedule. Data was analyzed through inferential statistics which involved testing of hypotheses using simple regression model at 5% significance level, descriptive statistics were also used, and this included the use of frequencies, mean, mode and percentages. Data was presented by use of tables and charts. Findings indicated that The overall level of adoption of the corporate governance stood at 73%. This shows that most of the firms in the NSE have adopted corporate governance. Findings also showed that individual measures of corporate governance(sub-indices) did not affect the value of the firm individually where \( p>0.05 \), but when aggregated there was a significance effect\( (p<0.05) \) this was tested using a simple regression model at 5% significance level, findings also show that size of the firm affected value of the firm, it was concluded that that the most implemented measure of corporate governance is shareholders right followed by board accountability, followed by market for corporate control followed by remuneration followed by financial disclosure and internal control, the least implemented measure of corporate governance is corporate behavior. It is also concluded that measures of corporate governance individually do not affect value of the firm but when aggregated they affect value of the firm. It is recommended that board accountability be improved by strengthening the regulatory authority also shareholders rights to be taken seriously to avoid agency principle conflicts, executive remuneration be moderate for better performance, disclosure and internal control be done effectively, activities relating to take-over's must be sanctioned by investors and corporate behavior must be nurtured in a predictable way for performance. It is suggested that further research can be done in the same area but in private companies.

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Human resource management is the strategic approach to the management of an organization's most vital asset, the people who contribute to the achievement of the objectives of the organization. Employee incentives constitute some of the high performance work practices used by organizations to improve knowledge, skills, and abilities of current and potential employees, increase motivation and enhance retention of quality employees. This paper examines the relationship between specific employee incentives to employee performance in private universities in Kenya. A census study included employees of Kabarak University. The study involved the use of structured questionnaires, secondary data was obtained from department of Human Resource. The analysis of the collected data was done by use of Mann Whitney U test, factor analysis and Chi-square, and presented using descriptive statistics in frequency tables and charts. Financial and nonfinancial incentives are applied to a great extent to motivate employees. Financial incentives that are perceived to have significant influence on employee motivation include: salary, insurance financing, retirement benefits, performance based rewards, holiday, overtime pay, and loan entitlement. Among the non-financial incentives with significant influence on performance were: creativity at work, organizational goals, challenging tasks, opportunity for personal development, autonomy and responsibility, teamwork, job security, professionally stimulating environment, opportunity to set performance goals, predictable work life, opportunity to lead, training and development and flexible policies. Recommendations include; the need for top management of organizations to design effective incentive schemes that comprise a mix of financial and non-financial incentives, with non-financial incentives being key, supplemented by financial incentives. The findings are vital for policy makers in human capital intensive organizations such as universities.

Keywords: Employee incentive, employee performance, motivation, private Universities.


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Changing societal and environmental expectations across the globe have driven firms to incorporate green management practices into corporate strategies. An organization’s future increasingly depends on its environmental sustainability, so it is vital to equip present business architecture with a framework for environmental management. A corporate green management practice is unlikely to permeate organizational systems unless social and environmental initiatives are integrated in the main business strategy, as advocated by the triple bottom line concept. The Triple bottom line concept focuses not just on the economic value, but also on the environmental value and social value of the organisation. The main objective of this study was to establish factors that influence employees towards adoption of corporate green management practices in the mobile industry in Kenya, a case study of Safaricom Limited. Several scholars had identified management commitment, employee empowerment, rewards, and feedback and review as influencing factors. The
researcher adopted descriptive research design and the target population was Safaricom Limited, Kenya. To facilitate and achieve the objectives of the study, both primary and secondary data was used. Secondary data was obtained from Safaricom Website and the print media whereas primary data was collected using structured questionnaires with both open ended and closed ended questions. The collected data was analysed using Statistical Package of Social Sciences (SPSS) to generate descriptive statistics in form of frequency percentages, mean scores and standard deviation. The analysed data was then presented using tables, charts and graphs. The research findings depicts that top management commitment, employee empowerment, rewards, and feedback and review strongly influence employees in adopting corporate green management practices at Safaricom. The study recommends to Safaricom for an enhancement on green training and increased efforts by the lead team in encouraging employee involvement in setting green objectives. The researcher also recommends that more descriptive surveys be carried out to determine the factors that influence employees to adopt corporate green management practices in the whole industry. Moreover, it is imperative that researchers continue to examine ways that motivate employees to engage in corporate green management practices in Kenya.

**Key Words:** Green Management, Management Commitment, Employee Empowerment, Rewards, Feedback and Review

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**B2013-24 An Evaluation On The Management Of High Altitude Training Camps In Kericho County, Kenya**

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High altitude training camps (HATC) play an important role in preparing athletes for local, national and international competitions. The purpose of this study therefore was to evaluate the management of high altitude training camps in Kericho County, in terms of coaching, adequacy of training facilities and admission of athletes to HATC. The study was prompted by the realization that no scientific study has been undertaken into whether the mushrooming HATC in various parts of the country meet the IAAF and IOC standards. The study was done in Kericho County, Kenya. The respondents were athletes, athletics coaches and HATC managers in Kericho County. The population was sampled according to Districts which constitute Kericho County, namely; Kipkelion, Bureti and Kericho. There was a total of seven HATC in the three districts, with one hundred and ninety athletes, ten athletics coaches and seven managers. The study utilized a survey research design and questionnaire was the appropriate research instrument for this study. Data were coded and analyzed using the Statistical Package for Social Sciences (SPSS). The computation of frequencies was used as a statistical method of organizing data. Being the best measure of central tendency, the mean was used, in some instances, to provide a single measure that summarized the data obtained. Data were analyzed using frequencies, means, and percentages. The data were then presented using tables. It was found out that the management of HATC in Kericho County was adequate and only 43.59% of HATC was found to be lacking basic training facilities.

**Key Words:** Evaluation, Management, High altitude training camps

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**B2013-25 Sports As Emerging Economies And Regional Development**

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Sports are important activities to both individual health and economic development in the county. Sports specifically athletics has been successful contributor to economic development in Kenya since independence.
The long distance athletes from Kenya have been champions and awarded gold medals yearly wherever the competition are hold in any part of the world. The money rewarded for the athletes from Kenya, are used in economic development and this has led to the growth of construction of storey houses in major towns in Kenya where the sportsmen and women come from. The paper focuses on how sports become a major contributor to economic development in Kenya, a forgotten field which should be distinguished for its role. Descriptive survey method through purposive-stratified random sampling and questionnaire technique were used to collect data from respondents. The study confirms that Sports has made sportsmen and women to become rich through participating international sports such as Olympics, Commonwealth, All Africans Games and others, leading to economic growth and development in their of origin. The paper encourages the sportsmen and women to continue to exploit their talents and as consequences to economic development. The findings will be vital for other sports women and men, who aspire to venture into the world of sports and its benefit to individuals and country at large.

Key Words: Sports, Development, Aspiration, Venture, Exploitation

B2913-26 The Role of State and Non-State Actors in Peace-Building in Mt Elgon Region

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The intra-state conflicts witnessed in the African continent pose a threat to the stability and security of the region. This paper analyzes the role of state and non-state actors in peace-building in Mt Elgon Region following the conflict witnessed in the region pitting the Soy and Ndorobo clans of the Sabaot community. The conflict resulted when members of the Soy clan rejected an attempt by the government to resettle the landless members of the Sabaot community citing biasness in the allocation exercise. This led to the formation of a ragtag militia group –the Sabaot Land Defence Force (SLDF) which unleashed terror on the residents. The conflict had great socio-economic impacts like loss of lives, massive destruction of property population displacement and feelings of hatred and animosity amongst the residents. The state intervened through a joint police-military force to restore law and order in the region. While a lot has been written about the causes and effects of intra-ethnic conflicts in Kenya, there is very little literature on peace-building. To bridge this information gap, the study used the survey research approach to explore the role of state and non-state actors in peace-building in the region. The study revealed that various actors have been involved in peace-building in the region. The study further revealed that the conflict attracted the intervention of other non-state actors including the international non-governmental organizations like the Medicines Sans Frontiers (MSF) and national nongovernmental organizations like the Kenya Red Cross Society, the National Council of Churches (NCCK), Mt Elgon Residents Association (MERA) among others which were involved in humanitarian assistance and peace-building activities. The paper contributes to the on-going dialogue on peace building in Mt Elgon and other regions emerging from similar conflicts.

KeyWords: Mt Elgon, Peace-building, Kenya, State Actors, Non-state Actors
B2013-27 Factors Influencing Labour Turnover in Fuel Service Stations: A case of Nyahururu Town

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The objective of the study was to investigate labour turnover problem in fuel service stations. Fuel service stations serve as a critical contact point for the oil industry and their ultimate consumers. The study specifically established how working conditions, career development, employment terms and psychosocial factors influence labour turnover in fuel service stations in Nyahururu town. The targeted population of 68 employees of the 13 fuel service stations in Nyahururu was studied through census. The study collected both primary and secondary data using questionnaires, with both closed-ended and open-ended questions. Data acquired was analyzed using SPSS and descriptive statistics. It was presented using tables, charts and graphs. Deductively, the results indicated possible situation in other fuel service stations in the country. Study findings revealed that the economic situations, under psychosocial factors, and working conditions were cited as the ones that affect labour turnover the most as the staff could look for greener pastures. The research concluded that contrary to the majority’s expectations, the employees at the fuel stations were generally happy with their jobs; career development had positive prospects. This indicated that change of circumstances within industry might have brought ‘a feeling good’ mood among employees. The study recommended that to control labor turn over, economic conditions need to be improved. It is good for a study to be done to establish industry-specific factors that affect labour turnover in oil industry in Kenya. Other sectors of the economy in Nyahururu should be studied as well and probably further similar studies should be done in other cities and towns.

Key Words: Labour Turnover, Fuel Service Stations, Forecourt Attendants, Psychosocial Factors.

E2013 SYMPOSIUM 2 – EDUCATION

E2013-01 Factors Influencing the Participation of Women in Distance Education: A Case of Kenya Methodist University

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Distance Education as an educational approach to higher learning, is gaining popularity especially among women. This study sought to explore the factors influencing the participation of women in distance education. The objectives of this research were to investigate the social and cultural factors influencing women participation in Distance Education, identify the family related challenges that women encounter as they participate in Distance Education, and to establish administrative factors influencing women’s participation in Distance Education. The researcher used a descriptive survey research design. The study focused on students of Kenya Methodist University enrolled in the distance learning mode of study. The study sample was selected using stratified random sampling and comprised of 108 respondents. Questionnaires were used to collect the data. Data was analyzed using statistical packages for social sciences (SPSS). Descriptive statistics were used to analyze the data. The results were presented in tables. The findings, reported to a large extent that, women participation in Distance Education was influenced by the factors identified in the variables. The critical factors in each of the variables were; aligned women chores, the role of nurturing and care-giving and availability of Social Science programs which are female oriented subjects. In conclusion, Distance Education creates a more women friendly environment, which is more sensitive to difficulties faced
by women learners in organizing their studies while at the same time managing their families and jobs. The study recommends that Distance teaching institutions should embrace modern information communication technology which provides opportunities for learning at a distance and most especially for women due to their multiple roles and unique learning styles.

**Key Words:** Participation, Distance Education

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**E2013-02 Pure And Applied Science For Vision 2030**

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Pure and applied science, in its broadest sense, means much more than simply being able to read, understand and write about pure and applied science and technology, however important these are. This also includes the ability to apply scientific and technological concepts and process skills to the life, work and culture of one’s own society. This paper aims at simplifying the concepts pure and applied science for utility by the population towards technological development benefits and challenges. The understanding of the concepts will lead to policies that reinforce investment and motivation in enrolment in pure science courses at various levels of Education. Training in pure and applied sciences gives a strong foundation to enhance literacy in technological advancement. This will enhance developing of career and skills relevant to the attainment of Kenya Vision, 2030. A literate population will manage its destiny better and harness resources at their disposal in a highly technological world. Understanding of basic scientific principles and laws will lead to respecting simple protocol processes e.g. curing in construction, basic health principles, etc. The population equipped with knowledge of pure and applied science will be sensitive to cause of accidents, wastage, efficiency, and conflicts with nature, technology and self. In bringing out the differences between pure and applied science in research and development, a few of the scientists and their discoveries will be discussed. A discussion on applied science and Technology to eliminate confusion of concepts is worth venturing into.

**Key Words:** Pure and applied science, Utility, Enrolment, Literacy, Scientific principle, Technology.

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**E2013-03 Factors Influencing Academic Performance in Urban Informal Settlements in Kenya: A Case Study of Public Primary Schools Of Kibera Slums, Nairobi County**

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The study set to establish the factors influencing academic performance in urban informal settlements: a case study of Kibera slums in Lang’ata District of Nairobi County. In spite of the government’s commitment to provision of universal Free Primary Education (FPE) to all children that have attained school going age, there are segments of the society which continue to face myriad of hurdles in access of and participation in basic education key amongst which are children in the slums. The dimensions of these hurdles include; high pupil teacher ratios, inadequate learning materials, and limited admission spaces due to fewer schools. Though these challenges exist in public primary schools, they are more pronounced in schools located in the informal settlements. This study was carried out in public primary schools located in Kibera slums of Nairobi County. The research employed the descriptive survey design. Four public primary schools found in Kibera slums and the head teachers were sampled using the purposive sampling technique. Nine teachers and eighty two class eight pupils from these schools were sampled using the simple random sampling technique. The study
used questionnaires for head teachers, teachers and pupils as the research tools. Reliability of the tools was guaranteed by a test-retest method, a pilot study was carried out in the neighboring Dagoretti district. This helped the researcher to identify questions that were ambiguous. Content validity was ensured by including as many questions as possible for each variable under investigation. Data collected was analyzed quantitatively and qualitatively. Data from open ended questions was analyzed using SPSS version 18 and Spread Sheets (MS Excel). Findings were presented in tables as well as bars and pie charts. Descriptive statistics was used to describe the sample. The responses obtained were presented in order of relative importance according to the objectives of the study. The study came up with the following findings: Most pupils came from poor backgrounds. Such backgrounds meant that parents could not afford decent housing and good sanitary facilities for their children. The majority of the families where pupils came from lived in single mud wells and iron sheet houses. All the respondents pointed out that academic level of parents was correlated to the performance of pupils in exams. It was evident that families in the slums lived on meagre incomes and could not afford all the basic needs of pupils. There was also much pressure on learning facilities due to high pupil teacher ratio. In the school environment, poor facilities and existence of various social evils affected the psychological state of pupils. This in itself affected the performance of pupils in examinations. The study fulfilled the expected objectives. It was established that there were various socio-economic, psychological and environmental factors that affected the performance of pupils in urban informal settlements.

**Key Words:** Informal settlements, Academic performance, Slums.

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**E2013-04 Anaysis of High School Drop Out Rates in Nyandarua County**

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Since the introduction of education in Kenya during the colonial era, secondary school education has expanded despite pronounced set back to its access. Students who enroll in secondary schools drop out before the completion of secondary school cycle resulting to wastage of resources and time. Student dropout rate is on the increase despite free education. Social learning theory explains school dropout as a learned behavior from influential models. Nyandarua County has been experiencing increasing rate of school dropout. This has adversely affected the standard of education in the County. Factors that led to this situation are unknown. This study endeavors to determine the factors leading to school dropout in Nyandarua County. The target population consisted of all students, teachers and head teachers from secondary schools in the County. The sample consisted of 23 head teachers, 92 teachers and 190 students in the district chosen from a cross section of 23 schools from the Provincial and District categories, randomly sampled from urban and rural set up, boarding and Day schools. The research design for the study was survey. Data was collected using questionnaires and analysis carried out using statistical programme for Social Sciences (SPSS) from which bar graphs, tables and pie charts were used to present the data. The data collected is expected to assist policy makers curb school dropout rate.

**Key words:** Education, Drop out, Nyandarua

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E2013-05 The Role of Private Primary Schools in Providing Education in Mbale Municipality in Uganda

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The purpose of this study was to establish the role of private primary schools in providing education in Mbale Municipality. The researcher used random sampling to select the respondents. The schools were purposively selected due to the duration of their existence. The sample comprised of five head teachers, fifty teachers and one hundred pupils, twenty support staff and twenty parents. Questionnaires, interviews, observation schedules and records were used as instruments of collecting data. Qualitative, Quantitative and Triangulation methods were the research designs used to establish the role of private primary schools in providing education in Mbale Municipality. Finally, the study used questionnaires and personal interviews to collect data from parents and the support staff. The study was guided by the generic question, ‘What is the role of private primary schools in Mbale Municipality’ and the specific question, ‘What roles have private schools played in the provision of education opportunities to Primary schools in Mbale Municipality?’ Data was analyzed using Qualitative Solutions for qualitative data and statistical packages for quantitative data. This study concluded that Private primary schools provide opportunities of study to pupils, employment to people namely, head teachers, teachers and support staff, and that the academic performance in private primary schools is better than that of government schools. The conclusion of the study is that private primary schools perform better than government schools in the academic performance and the preparation for employment. The study contributes to knowledge by establishing that the private primary schools provide quality education and provides employment to the Mbale community. This study is significant to investors and policy makers in decision making. The government should encourage and support the contribution of private primary schools.

Key Words: Academic performance, Education, Quality education, Private primary schools.

E2013-06 Communication Impairments And Knowledge Acquisition

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Knowledge acquisition is facilitated through communication is through language. Therefore, communication impairments would affect knowledge acquisition. The question, however, is how? This paper presents a critical descriptive analysis of different communication disorders. It shows the ways in which the discussed disorders affect knowledge acquisition and the resultant impact. The paper then provides practical suggestions on how to deal with the ensuing problem.

Keywords: Knowledge, Acquisition, Communication, Impairment, Language, Aphasia

E2013-07 An Evaluation on the Management of High Altitude Training Camps in Kericho County, Kenya

David Langat; Athenai Secondary School, Dr Betty Tikoko; Kabarak University

High altitude training camps (HATC) play an important role in preparing athletes for local, national and international competitions. The purpose of this study therefore was to evaluate the management of high altitude training camps in Kericho County, in terms of coaching, adequacy of training facilities and admission of athletes to HATC. The respondents were athletes, athletics coaches and HATC managers in Kericho County. The population was sampled according to Districts which constitute Kericho County, namely; Kipkelion, Bureti and Kericho. There was a total of seven HATC in the three districts, with one hundred and ninety athletes,
ten athletics coaches and seven managers. The study utilized a survey research design and questionnaire was the appropriate research instrument for this study. Data were coded and analyzed using the Statistical Package for Social Sciences (SPSS). The computation of frequencies was used as a statistical method of organizing data. Being the best measure of central tendency, the mean was used, in some instances, to provide a single measure that summarized the data obtained. Data were analyzed using frequencies, means, and percentages. The data were then presented using tables. It was found out that the management of HATC in Kericho County was adequate and only 43.59% of HATC was found to be lacking basic training facilities.

**E2013-08 The Perceptions of Believers on an Effective Church Leader:**

*A Study of Selected Churches from Naivasha Location*

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Considering society’s changing trend the church believers are need to understand who exactly is an effective church leader. The future of this nation depends much on the church leadership as a matter of urgency. Chapter six of our constitution requires leaders with integrity, against the common observation that secular leadership leaves people confused. According to media reports, some leaders say something today and turn immediately to blame the media for misquoting them. Is the church leadership any better? This paper examines the role of church leadership in guiding people and bringing development desired to move them to a place intended for them by their maker, God. An effective leader is expected to bring positive changes to his followers and the world around. The study interviewed pastors from select churches, their assistants and eight followers from each select church. Differing views from interviewees gave various views that were analyzed and gave key findings and conclusions. Open ended questionnaires sought information on qualities, capability, character and behavior of a leader from the perceptions of the interviewees from the select churches in Naivasha location. The pastors interviewed to find out their agenda for development in their respective churches. According to Adair (2001) the 21st century, which is time of considerable change, the church leaders have to renew the church commitment to development in various ways for the followers to cope with the change. Effective leadership is about people and Jesus demonstrated His genius as a leader whose impact is still felt for over two thousand years to date (Adair 2001).

**Key Words:** Development, Leadership, Pastors, Church, Church believers/followers

**E2013-09 Assessment of ICT Integration into Instruction in Teacher Education Institutions in Kenya**

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There has been remarkable increase in access of ICT equipment in teacher education institutions. However, reports indicate that teacher educators are not integrating these technologies in their instruction in ways that make a difference in student learning. To help teachers make informed decisions on student learning, there is need for current knowledge of teachers’ integration practices. Research findings from developed countries indicate that there has been considerable progress in this area in many teacher education institutions. But the status of the integration of ICT by teacher educators in Kenyan teachers colleges is largely unknown. This study therefore set out to determine the level at which teacher educators in public primary teachers colleges
have integrated ICT in their instruction. The simple random sampling was used to select six teachers colleges and 169 respondents who participated in the study. Data was collected using a questionnaire, an interview schedule and an observation schedule. The Data collected were analyzed descriptively with the help of SPSS program version 16.0 for frequencies, means, standard deviation and percentages. The results indicated that there is a low level of ICT integration into teaching in all teachers colleges. Based on the findings, it is recommended that ICTs integration be made part of undergraduate training in universities in order to equip future teacher educators with ICT skills; that the government should equip teachers colleges with sufficient and modern computers with internet connectivity to enhance access; colleges should provide in-service training on ICTs for teachers. Furthermore, colleges should hire technicians to maintain and service available ICTs. The ministry of education should also embrace ICT and demand professional documents from teacher educators be typed and sent online. Additionally, colleges should not rely only on government funding but extra income by initiating ICT training centres to train outsiders in their colleges. Finally, it should be mandatory that all college principals be knowledgeable in ICTs to support ICT initiatives in teacher education institutions.

E2013-10 Communication and Maternal-Child Health Promotion

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Ensuring timely access and utilization to prenatal health care is a critical strategy for improving pregnancy outcomes. The principal idea is for maternal health patients to seek and utilize trained facility health attendants. Although improvement has been made in regard to both prenatal and postnatal Maternal-Child care in Kenya, the media still carry stories of Maternal Health patients preferring to give birth at home especially in rural setups thus putting their lives and that of the unborn at risk. Kenya Vision 2030 focuses on provision of quality, efficient and acceptable health care systems. The Vision’s first Medium Term Plan-MTP (2008-2012) assessment reveals that there has been considerable decline in child mortality rates despite the regional disparities. The Kenya Demographic and Health Survey 2008/2009, the national under five mortality rate (UMR) stood at 74 per 1,000, with regional estimates ranging from 51 per 1,000 in Central to 121 per 1,000 in Western and 149 per 1,000 in Nyanza. The MTP target of the under five mortality of 55 per 1,000 live births in 2009/2010 was not attained. This study determined communication strategies that could be utilized in promoting Maternal-Child service utilization. Answers to the following research questions were sought: What factors influence the utilization of Facility Maternal-Child Health services? To what extent does Health Provider-Patient communication influence Maternal-Child health utilization and outcome? And what strategic communication approaches can be mainstreamed in Maternal-Child health campaigns in rural areas? The study was grounded in the social cognitive theory of Albert Bandura (1986). This theory assumes that although environmental stimuli influence our behavior, individual personal factors such as beliefs and expectations also influence how we behave. The theory was utilized to analyze the data attained. The target population for the study was 28 respondents; 20 Maternal-Child Health Patients (MCHPs), 02 Community Health Workers (CHWs), 02 Facility Health Staff (FHS), 02 Traditional Birth Attendants (TBAs) and 02 Religious/ Cultural Group Leaders (R/CGLs). The study was conducted in Busia County but specifically in Budalangi and North Teso constituencies. Data was generated through questionnaires and in-depth interviews. Qualitative data analysed through open coding, axial coding, and selective coding of the data which was thematically analysed to come up with findings.
E2013-11 Drop Out Among Pupils in Rural Primary Schools in Kenya: The Case of Nandi North District, Kenya
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Education plays an important role in socializing the individual to fit in the society because it empowers people to improve their well-being and participation in nation building. However, one phenomenon that has raised a lot of concern among policy makers is the spate of school dropout among primary school pupils after the inception of Free Primary Education programme in 2003. Drop out poses a threat to gains in education despite the Government’s emphasis on Education for All by the year 2015. In Nandi District the problem is more pronounced among the primary pupils. The study was conceived as a result of the allegations of increased pupil dropout rate in public primary schools causing wastage and affecting the quality of curriculum implementation. This study sought to establish the causes of drop out among pupils and strategies that institutions of learning can adopt to address this problem. The study adopted descriptive survey design. The study targeted 6322 class eight students, 2569 class teachers and 286 head teachers. Out of this target population, a sample size of 1970 class eight pupils, 769 class teachers and 86 head teachers was selected. Data was collected using class teachers’ and pupils’ questionnaires and head teachers’ interview guide to gather information on the causes of school dropout. Data was analyzed by use of descriptive statistics and the findings presented in form of figures and tables. The study findings indicated that teenage pregnancy, chronic repetition, family size, lack of motivation for schooling, parental negligence, influence from peers, lack of trained teacher counselors and early marriages were the main causes of school dropout. It further pointed out that the factors leading to the dropout of girls are different from those for boys. The study therefore recommends that the government and other stakeholders should address the issue of school dropout rate and come up with measures to curb it to avoid wastage of school curriculum and resources. In addition, the government should strengthen policies on the expenditure of the FPE to benefit all children.

E2013-12 Factors Contributing to Increased Indiscipline in Secondary Schools in Kenya
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Education plays a pivotal role in the development of a country. However, in the recent past, secondary schools have witnessed mass acts of indiscipline which is a threat to the core fabric of morality and development of future generation in our country. Though measures have been put in place, many students have continued to become deviant, rebellious and disobedient. The research tried to identify the factors that have contributed to increased indiscipline of students in secondary schools in Kenya. The study surveyed schools in Eldoret West, Eldoret East and Wareng Districts located within the Eldoret Municipality in Uasin Gishu County. Both quantitative and qualitative approaches were used to answer the research question. The sample was obtained using purposive and stratified sampling techniques. In purposive sampling a researcher selected the persons, institutions or the groups in order to obtain needed information. In the study, the head teachers, the deputy head teachers and the guidance and counseling teachers were selected. Stratified sampling was used to group schools in Eldoret municipality either as public or private in answering the research question. The findings revealed that there was a relationship between social issues and increased indiscipline in schools; that legal affected the efforts by teachers to make students disciplined, ICT was one of the avenues through which indiscipline increased in secondary schools. To address the problem, the following were recommended:
reinforcing of guidance and counseling in schools. Church intervention measures are strengthened, censoring of ICT materials with adult content, re-education of teachers on legal issues which are educational in nature and team work in enforcing discipline by stakeholders.

**Key words**: Factors, Contributing, Increased, Indiscipline and Secondary Schools.

**E2013-13 Institutional Factors Influencing Teacher Turnover in Secondary Schools in Baringo County, Kenya**

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Employee turnover occurs when workers leave an organization and need to be replaced by new recruits. High employee turnover is a common occurrence in the teaching profession in Kenya. It is for this reason that this study was designed to examine the institutional factors responsible for the teacher turnover phenomenon within secondary schools in Baringo County. The study was guided by the Herzberg’s motivation theory. Descriptive survey research design was used. All the 21 public secondary schools were used. Simple random sampling technique was employed to select 97 teachers out of the total population of the 329 TSC teachers in the district to participate in the study. Data was collected by the use of a questionnaire. The data collected was analyzed using descriptive statistics and are presented in the form of frequency tables and percentages. Based on the findings of this study, it can be concluded that remuneration, advancement and working conditions were the domains mostly responsible for the teacher turnover in Baringo secondary schools. On the whole, the study found that institutional factors influence teacher turnover in Baringo County. As such they should be taken into account in trying to reduce turnover of teachers.

**E2013-14 Role of Information Communication and Technology (ICT) in Promoting Inclusive Education of Learners with Visual Impairement in Public Universities in Kenya**

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Information from Ministry of education (2009) indicates that 21% of learners with VI attend schools. There are 15,527 learners with VI, and 60 learners with VI were in universities. The number of these learners with VI has been increasing since then in public universities. These have been attributed to increase in awareness about disability and availability of personnel. However, the role ICT plays in enhancing access of learners with VI to learn together with regular learners in public universities is unknown. The purpose of this study was to find out the role of ICT in promoting inclusive education of learners with VI in public universities in Kenya. The objectives are to: find out the use of low vision devices among learners with low vision; and to assess the use of optical devices among learners who are totally VI in public universities in Kenya. The study employed descriptive survey design. The study was carried out in 3 public universities that offer special needs education in Kenya. The population consisted of 60 learners with visual impairment, 160 sighted learners, 32 lecturers and 3 Heads of Department (HODs) of SNE. Saturated sampling was employed to sample 54 learners with VI, 144 sighted learners, 28 lecturers and 2 HODs. Questionnaire, interview schedule, and observation schedule were used to collect data. The instruments were validated using content validity. Test-retest method was used to establish reliability of the instruments on 10% of study population, where the research instruments were presented to 6 learners with VI, 16 sighted learners, 4 lecturers and 1 HOD to establish the reliability of the instruments. Findings of the study revealed that the use of Braille and Braille paper, computers with jaws
programme, white cane, slate and stylus, abacus, short mobile service (sms), large print, talking calculators had enhanced inclusive education of learners with VI, while the use of computers with screen readers, screen magnifier, dolphin pen and talking books were inadequate or not used at all. The study recommends that all universities should provide computers with software that are disability friendly such as reading materials such as screen readers, screen magnifier, provision of talking books and dolphin pens to enhance access and equity in education of learners with VI in public universities. The study is significant to learners with VI, sighted learners, lecturers and education stakeholders in equipping them with knowledge in ICT for learners with VI.

**E2013-16 ICT and The Church: Role of ICT in Evangelism**

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The greatest call to all Christians is Matthew 18:19 “…Go ye therefore, and teach all nations, baptizing them in the name of the Father, and the Son and the Holy Ghost...”. So at all times Christians need to reach the world with the “good news”. Realizing this call is however proving to be a challenge in today’s information age where people are so inclined to information and communication technologies (ICT) such as internet. ICT is so diffused into the society that youths would rather use social media to share their testimonies than to meet their peers for fellowship. This paper seeks to answer the following questions: Is social media a blessing or a curse to evangelism? How do we adapt ICT for evangelism? The paper also highlights the open source application software available for church.

**Keywords:** Church, Evangelism, ICT, Social Media, Christianity.

**E2013-17 Hair: A Samburu Identity Statement**

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Hair among the Samburu culture is more than simply statement of personal taste and style. It is a marker of cultural identity, age, gender, idea; avenue of artistic expression and mastery. This paper discusses hair as a mirror of identity in the Samburu culture. Despite westernism and Christianity the Samburu cultural practices especially adornment has persisted. The study was grounded in the cultural theory of history. The method applied in the study was largely qualitative research. This was done through library search, interview schedules and observation and field photography. This study provides literature to historians, artists, ethnographers, anthropologists and the general public as a body of knowledge and reference material in studying cultural history of other communities.

**Key Words:** Samburu, Hair, Symbolism

**E2013-19 The Revolution of the African Gulags**

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For a long time African states have been at the realm of all misfortunes since the slave trade days then emanated interventionist, half a century later the effects of this insubordination are greatly felt and it’s evident that the imperialists are in no haste to vamoose. Since the days of Kwame Nkrumah of Ghana and Jomo Kenyatta of Kenya, Marcus Garvey of Jamaica and W.E .B Dubois with their call for pan-Africanism, African
leaders exhibited lethargy in executing this call but the Nkrumah’s prophesy (unite or perish) is getting realized with the Africa’s sovereignty of state just being a hypothetical belief. This is greatly exhibited by the predicaments of every nation or its leader that dares to become in regards to the interventionist, contrary lead his county. An epitome of them is Nkrumah of Ghana whose release from the reins of power was by the infamous way of a coup de tat. There followed a series of civil wars and attempted coup and genocides, the recent one being Muammar Ghadaffi who was kicked out of power with assistance coming from imperialist. Research shall exhibit that Ghadaffi was among those at the frontline in the call for union of Africa. This happened with the beneficiaries being the very imperialists who in disguise of peace keeping mission while at the background scoop massive resources in form of crude oils and natural minerals. This research therefore is aimed at not only giving the cause, course, effects but also the solution of this debacle.

**E2013-21 Journalism in Times of Change: An Exploration of the Professional Identity of Kenyan Journalists**

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The history of the Kenyan media is marked by an unpredictable and changing political, socio-cultural, economic and technological advances that have heavily influenced its development for the practice of journalism. This changing environment has placed a new edge of threatened professionalism. In Africa, the journalist’s traditional tenets – of objectivity and neutrality – can be challenged and confronted by the journalist’s patriotic sentiment and their feeling of belonging. In this mix is the seemingly declining professionalism of journalism. Given these trends mixed with the structural changes in journalism as a practice, the purpose of this study is to explore possible changes of the professional identity of Kenyan journalists. To achieve this, the study focused on the democratic assignments. The study was carried out in Nairobi County and targeted practicing journalists in four leading media houses. The study is aligned to pragmatism philosophical paradigm because multiple perceptions and interpretations of professional ideals of journalism have emerged. Survey technique was employed to generate both quantitative and qualitative data. The data was collected using questionnaires and interviews. Descriptive and inferential statistics was used to analyze quantitative data and thematic analysis for qualitative data. The study is important as it will provide useful guidelines that will help shape the profession of journalism in Kenya.

**Key Words:** Professional identity, Ideals, Democracy, Journalism

**E2013-22 Relationship Between Factors Which Contribute to Teachers’ Job Satisfaction and Academic Achievement Among Secondary Schools In Homa-Bay County, Kenya**

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The study analyzed the relationship between factors contributing to teachers’ job satisfaction and academic performance among public secondary schools in Homa-Bay County. The study emanates from a background of dismal academic performance of secondary schools as alleged by Ministry of Education Report (2011) and constant complaints of working conditions by teachers. A sample of 32 secondary schools was randomly selected from the population of 300 public schools for the study. Data was collected by a Minnesota Satisfaction Questionnaire (MSQ) and was analyzed by use of descriptive and inferential statistics. The analysis of variance tests were done at 0.05 alpha level of significance. Findings revealed that factors of job satisfaction
were job security, work environment, nature of work, technical supervision, recognition, and further training opportunity. The study revealed strategies for enhancing job satisfaction such as better salary, fair promotion, professional development, and good working conditions. It was also found that academic performance is pegged on teachers' job satisfaction. From the findings of this study the researcher recommends improving teachers’ job satisfaction and academic performance in Homa-Bay County; the government should improve salaries of teachers, the result shows that most of the teachers still work in deplorable conditions, the ministry of education should encourage strong parental and community support through parent teacher association, Board of Governors and CDF. These bodies should ensure that secondary schools are well equipped with necessary learning facilities for quality education and improved academic performance. It is hoped that the findings of this study may be useful to the Ministry of Education, personnel involved in decision making, policy formulation and implementation, and secondary school principals towards making sure that teachers are satisfied for schools to perform well and towards realizing the vision 2030 in education sector.

Key Words: Factors of job satisfaction, academic achievement, Strategies for enhancing job satisfaction.

E2013-23 Rethinking Higher Education in Kenya: Energizing Complimentarity Linkages between the Delivery and Transformative Contexts to Leverage Vision 2030

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The linkages between education and industry cannot be gainsaid. Since the goals of development are continuously reviewed to address felt and expressed needs, this relationship is always in a moving equilibrium where the system of education changes, akin to the Kuhnian paradigm shifts, to keep in tandem with the goals and aspirations of development. The history of Kenya's higher education system shows that curriculum changes have always been instituted, albeit, to keep it in tandem with socioeconomic needs. Indeed, educationists and other stakeholders in Kenya are currently at loggerheads over whether or not to implement drastic changes suggested on the system of education. This is probably because such past efforts have been less than effective. This paper reviews literature that explores these linkages between higher education and industry and asserts that while changes in universities are pivotal, this alone is not sufficient to address the conundrum of the relevance of higher education. It submits that this must be complemented by firm-specific programs and individual learners' efforts. Thus the paper suggests that rather than merely blaming universities for the mismatch between the knowledge and skills that graduates posses and those required by industry, all stakeholders should identify and address issues that are best suited to compliment efforts through higher education.

Key Words: Kenya, University-industry-government-linkages, Complementarily, Relevance sustainability

E2013-24 The Hawking Of University Education In Urban Centers In Kenya: Challenges And Way Forward

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The demand of university/higher education in Kenya has been on increasing demand. Consequently, public and private universities have overenrolled in order to cater for this demand. Moreover, the universities have used this crisis to generate income in order to support both human and material resources needed for what is
In order to make education accessible to students, especially the working class, universities have moved to urban centers where they have strategically positioned themselves by opening satellite campuses. The main operations of many universities are central business districts in many urban centers. A few universities that have not secured the coveted areas have moved to the periphery of urban centers. Proximity to the city notwithstanding, universities are engaged in stiff competition to outdo each other by introducing new and cost effective courses which are taught in sandwich programmes. Thus, the quality of the education offered is brought into critical scrutiny in this paper with a view to establishing the challenges experienced and suggestions on how to improve the situation. The data for this paper will be elicited by use of questionnaires administered to sampled instructors and students from public and private universities’ satellite campuses in urban centers. Thereafter, a critical analysis of responses will be done and findings discussed.

**E2013-25 Impact of Guidance and Counseling Services in Selected Boarding Schools in Dagoretti Constituency in Nairobi County**

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This study was carried out with the main purpose of investigating if the G/C services in public secondary schools could be used to impart acceptable societal values which are fast getting degenerated on High School Students. The study was carried out in boarding public secondary schools in Dagoretti constituency in Nairobi County. Public Schools were preferred because they draw students from diverse backgrounds. Throughout history, man has had structures and institutions to ensure the propagation of its societal norms. But urbanization, intrusion of foreign cultures and the fast changing socio-cultural activities has caused the erosion of such structures. Kenyan society is not any different. Guidance and Counseling services are purported to be taking place in Kenyan schools since the early 1970s but the moral standards of the youth has taken the reverse trend. The study’s main objective was to interrogate if dissemination, access and utilization of the counseling services could go a long way to improve the moral standards of the high school students. The data for this required that G/C teachers were asked to fill structured questionnaires whose findings indicated that there was hardly any social oriented type of counseling taking place in the schools under study. A majority 60% of them indicated that they had very few lessons allocated in the time table while 40% said they had none. The study established that the issues that students sought counsel for were academic related such as selection of subjects or choosing their careers. This view was confirmed by student respondents. The majority 57.5% indicated they would not go for counseling on social issues. Interestingly, a larger percentage of the girls showed that they were willing to go for counseling than boys. Objective two of the study sought to ascertain the levels of morality among high school students. The data for this was obtained both through the semi-structured questionnaires and the use of Focus Group discussions. In both cases, the study found out that many students are dishonest and a larger percentage was sexually active. In addition, students’ attitude towards counseling was found wanting. 90% of the students interviewed indicated that there are counseling services in schools but that students do not utilize the service to resolve social issues. In conclusion, the study revealed that social cultural values that should be the core of any education system have been overridden by academic excellence at the expense of moral uprightness. The onus therefore is on teachers, MOE, parents
and other stakeholders to rise to the occasion and salvage our youth if posterity is to be assured of a dignified cultural heritage.

**E2013-26 Teachers’ Perception of their Workload and Performance in Kanduyi Division of Bungoma District, Kenya**

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This study was carried out with the main purpose of finding out the teachers’ perception of their workload and performance in Kanduyi Division, Bungoma District. The study sought to find out the types of work teachers are assigned in primary schools and also if teacher overload is a problem and identify its effect on teachers’ performance. The study was carried out in ten primary schools in Kanduyi Division of Bungoma District. Among the ten schools was a girls’ school and nine mixed primary schools. The subject samples included 24 head teachers, deputy head teachers and senior teachers. The sample also included 76 teachers and 3 education officers. Purposive and stratified sampling was used to select the schools and subject samples. Descriptive Research method was adopted. Questionnaire containing the attitude and rating scales was administered to the Head teachers, Deputy Head teachers, senior teachers, teachers and Education officers. Descriptive statistics was used in data analysis and interpretation. Based on the study, policy makers in the Ministry of Education are recommended to work towards improving the performance of teachers in primary schools by easing the problem of teacher overload.

**E2013-27 Contraceptives- A Hex or a Vex?: A Case Study of Naivasha District**

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According to Genesis chapter one verses 27-28 it reads “so God created man in His own image, in the image of God created he him; male and female created he them. And God blessed them, and God said unto them, be fruitful, and multiply”………………But the uncanny wisdom of man invented contraceptives to control birth. Man believes that few children will guarantee quality long life. But a family with many children is associated with low quality short life. The opposite is happening to the dismay of many. Based on recent studies, those using certain contraceptives have been found to have increased risks of cancer and heart attack. Also, use of contraceptives are associated with many social evils such as pre-marital sex and adultery.

Therefore, that which was supposed to bring happiness has brought sorrow. On the other hand, those women who have never used contraceptives despite having many children have lived relatively trouble free long life. Reasons for these phenomena are not clearly understood given that many studies on the effects of contraceptives on women have concentrated on western countries. The paper aims at establishing whether contraceptives are a boon or a jinx. The paper will specifically examine the relationship between increase in lifestyle diseases and use of contraceptives among women. The study will be located in Naivasha District. All women of reproductive age will be targeted. The study will use the survey method. Both quantitative and qualitative data will be collected. In-depth interviews will be conducted. Purposive sampling will be used to select a heterogeneous sample of women based on sexual experience, area of residence, educational attainment and social background. A sample size of three hundred women will be studied. A pilot study will be done to ensure reliability and validity of data collection instruments. The data will be analyzed using correlation analysis. The results will be presented in graphs, charts, tables and figures. The data generated from this
study is expected to shed light on adverse effects of contraceptives on women. It can also help policy makers come up with safe methods of birth control and better reproductive health policies.

**Key Words:** Contraceptives, Boon, Jinx, Health Policies

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**E2013-29 The Teaching of English Idioms in Kenyan Secondary Schools: Difficulties and Effective Strategies**

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The acquisition of idiomatic expressions is one of the primary challenges to learners of English as a Second language (ESL), yet the learners are expected to use these expressions in their writing. The study on which this paper is based sought to assess the teaching of English idiomatic expressions in Kenyan Secondary schools with a view to establishing the difficulties teachers face in teaching the expressions and then proposing effective strategies that can be applied for effective teaching of idioms of English as a Second Language. 10 teachers of English from both rural and urban secondary schools in Kenya were interviewed to find out the actual practices in their classrooms, the difficulties they face, and the effective strategies they employ for the teaching of English idioms. The data collected were qualitatively analyzed. The finding is that it is possible to infer semantic relations between the literal sense of individual parts of an idiom and its meaning when interpreting compositional idioms. Secondly, there is incongruity between form and meaning when dealing with non compositional idioms since their semantic interpretation cannot be retrieved by means of their constituent parts. The study recommends that an understanding of the etymology of idioms can improve the comprehension and retention of idioms.

**Key Words:** Idiomatic expressions, Semantic relations, Compositional idioms, on compositional idioms

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**E2013-30 Teachers’ Viewpoints on the Use of Ict in the Teaching of Languages in Kenya**

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Information Communication Technology (ICT) is increasingly becoming important in our daily lives and in our educational system. Empirical evidence from the education sector suggests that if used appropriately for specific purposes in a specific context, ICT can be an effective tool in supporting teaching and learning. Teachers’ viewpoints are critical in influencing students’ confidence and attitude towards ICT as teachers provide important role model to their students. This paper was, therefore, guided by three main objectives. First, the paper identifies the perception of teachers towards ICT as a tool of teaching languages. Secondly, the paper discusses the adequacy of the infrastructural facilities in schools to support ICT integrated learning of languages. Lastly, the paper examines the teachers’ ICT levels of proficiency to deliver language learning. 30 teachers of languages in Secondary schools were sampled for this study. Stratified sampling technique was justified by using the three tiers of classifying Kenyan schools into national, county and district schools. A total of ten schools in each category were chosen using random sampling. Data was collected using questionnaires and analyzed using descriptive statistics. The study notes that the level of ICT knowledge by language
teachers is inadequate to successfully integrate ICT in language teaching. Secondly, teachers view ICT as a tool to deliver IT related courses and not to teach languages. In addition, the study notes that there is inadequate infrastructural development in schools due to lack of connectivity to the outside world. Lastly, the paper proposes recommendations for pedagogy.

**Keywords**: ICT, Integrated learning, Teachers’ viewpoints, Infrastructural facilities, Pedagogy

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**E2013-31 the Future of Print Journalism: Internet Technology and the 21st Century Newspaper in Kenya**

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The future of print journalism has been debated by media scholars especially during the surge of technology. For the last five decades, media houses and the press has been adopting online and digital forms of newspapers. There have been concerns that print journalism is exiting the scene slowly and prospects are that soon, there could be no newspapers on the streets. This has been made worse by the invasion of social media. But the question is, with the proliferation of new media products, is there a future for print journalism and therefore for the newspaper? This article is a study of the history of the online and digital newspapers and whether they have succeeded in breaking the market. It will pose questions such as why print newspapers still exist regardless of the fact that digital and online forms are free on the internet. The aim will be to trace the success and failures of the online journalism and then from a futuristic perspective give prospects for the print journalism. The study will rely on newspaper companies in the UK, United States and Kenya. The companies will be purposively selected for comparison and common trend in market growth. When the findings are analysed, the value of internet technology in the development of print newspaper will be assessed and conclusions and recommendations proposed.

**Key terms**: Print Journalism, Internet, New Media, Press, Newspapers

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**E2013-32 Gender Based Barriers to Effective Education for Refugees in the Dadaab Complex, Kenya.**

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Fransicah Wamocho & Geoffrey Karugu. Kenyatta University

Education for refugees is a fundamental need and is as essential as emergency services. Education has a crucial preventive and rehabilitative part to play in fulfilling the needs and rights of children in conflicts and post conflict situations. However women and girls have a historical disadvantage compared to men and boys. The main objective of this research was to investigate gender issues in the education for refugees in the Dadaab refugee camp. The researchers used descriptive survey design. The target population comprised of primary school head teachers, teachers, pupils and parents. Sampling techniques included stratified random sampling for schools in the various camps in the Dadaab complex. Purposive sampling for the head teachers and simple random sampling for teachers, systematic sampling for pupils and convenience sampling for parents was used. The sample comprised of 10 head teachers drawn from the various schools: 130 pupils, 130 teachers and 20 parents making a total of 120 respondents. The research instruments used were school data sheets for head teachers, questionnaires for pupils and teachers and interview schedules for parents. Data was
analyzed by use of descriptive statistics such as frequencies and percentages using the statistical package for social sciences (SPSS) and presented using tables, graphs and charts. Discussion and interpretation of the findings established that there were glaring gender disparities in enrollment with the enrollment of boys being higher than that of girls throughout the years in all camp schools, high levels of girls dropout was occasioned by cultural practices such as female genital mutilation (FGM), early marriages and lack of sanitation facilities for girls. In conclusion girls in the refugee camps faced more hindrances in their endeavor to access basic education compared to boys thus making education to be highly gendered. The researchers recommended that the NGOs and other support agencies in support of education in the camps devise various strategies to rescue the girl child from the cultural practices and come up with incentives of retaining the girl child in school.

**Key Words:** Education, Refugees, Gender issues.

**E2013-33 Factors Influencing the Choice of Suitable Web-Based Learning for Distance Learners: The Case of Kenya Methodist University**

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Web-based learning (WBL) has significantly changed the way teaching and learning is delivered. This study concerns WBL and the factors that determine its choice for distance learners at the Kenya Methodist University. The aim of this study was to analyze the influence of personal characteristics, student needs analysis, teaching and learning practices, financial commitments and organizational policies on the choice of suitable WBL for distance learners. The study aimed to determine the extent to which the research-based results have been used in the implementation of successful WBL. The study used a cross-sectional descriptive survey research design. Data was collected using questionnaires and interview schedule. Purposive sampling was used to determine the target population. The sample size consisted of 305 students from the BSc. and MSc. in Health Systems Management and 16 Senior Administrative Staff of the Institution. Findings revealed that personal characteristics and financial commitment had no significant influence on the choice of suitable WBL. It further revealed that Students’ Needs Analysis, Organizational Policies, ICT Infrastructure and use of multimedia tools, Teaching and Learning Practices, had a significant influence on the Choice of Suitable Web-Based Distance Learning (WBDL). The study concluded that the model currently being implemented is still at the pilot stage and is in agreement with current literature. In addition, the model is customized to suit the caliber of students and staff. The study recommended that intensive training for staff and students on the use of WBL tools is conducted. There is need for thorough analysis and harmonization of the main stakeholder needs for successful implementation of WBDL. Lastly, relevant policies should be developed to facilitate proper administration and management of WBDL.

**E2013-34 The Impact of Caring and Involved Fathers on Child Behaviour: A Case of Street Children and Juvenile Delinquents in Nakuru County**

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Fathers play a critical role in the well-being of their children. Research in recent years has been definitive in underscoring that fathers have a distinct, necessary, and irreplaceable role to play in child development. The purpose of the study was to investigate the relationship between caring and involved Fathers and child behaviour. Specifically the study sought to find out the relationship between the absenteeism of Fathers and the influx of children to the streets of Nakuru. The study also sought to find out the relationship between the absenteeism of Fathers and delinquency. A descriptive survey design was used in the study. Data was
collected through focused groups discussions, in-depth interviews and observation. The data collected was analyzed by use of descriptive and inferential statistics. For descriptive statistics, percentages and frequencies were used while chi-square was employed for inferential statistics. The findings of the research may shed light on why children find themselves in the streets in town and later engage themselves in criminal activities. It may also add knowledge on the need for Fathers to be educated that positive paternal involvement is beneficial to children and the family and ultimately to the entire nations.

**Keywords:** Caring and involved Father, Absenteeism, Child Behaviour, Street Children, Juvenile delinquency, Child Development, Father–child relation, Parenting.

**E2013-35 Ethnic Stereotyping In Kenyan Television Comedy Shows: Harm or Humor?**

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Ethnicity is still a problem in Kenya. Scholars are currently debating on the value of ethnicity in the development of democracy. This interest has generated terms such as negative ethnicity among others that demarcate what is seen as positive side of ethnicity. Ethnicity has been entrenched in Kenya through stereotypes that date back to pre-independence. These stereotypes have been carried on by people and currently, it has been brought forth forcefully by the media. Since ethnic stereotyping is looked down upon, it is being satirized by television comedy shows. In Kenya, there have been upshots of television comedy shows but the leading one whose content will be analysed in this paper are Kenya Kona [Citizen Television and KTN TV] and Churchill Live/Show [NTV]. This article evaluates the value of ethnic stereotypes that are inculcated through discursive ethnic labels in television comedy shows. The ethnic conflict that befell Kenya after the 2007 elections calls for a need to evaluate ethnicity in Kenya and thus; influential institutions that entrench it must be put on the spot. The study will do a content analysis of the selected shows under the auspice of the theory of stereotyping.

**Key words:** Ethnicity; Comedy; Stereotyping; Ethnic Labels

**E2013-36 The Provision of Free Education and its Impact on Quality – The Uganda Chapter**

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The concept of “Education For All” is a global undertaking. Uganda as a nation launched the Universal Primary Education (UPE) and Universal Secondary Education (USE) aiming at making education accessible to all if not, at least 90% of all school going children. However, the premise of quality education at both levels continues to be challenging in response to the increasing population. This is relevant especially in regard to the question of attainment of basic literacy and numeracy. This study aims at exploring factors that impede learners’ attainment of literacy and numeracy was carried out in selected primary and secondary schools within Gulu Municipality in Northern Uganda revealed as per the learners’ exercise books and examination grades. That attainment in literacy and numeracy was still below average. The causes of these revelations were seen to emanate mainly from; the large teachers/ student ratio (1:80); from poor instructional methods by the teachers, lack of meals at school, inadequate reading materials, failure to mark learners’ books, automatic promotion among others. As a result of the above findings, many teachers have not been able
to attend to individual learners with special needs because of the large numbers. For instance, results from Southern and Eastern Africa consortium for monitoring education quality (SACMEQ) conducted in 2007 for P.6 was below the SACMEQ average score for reading and Mathematics. Similarly, a report from the National Assessment of progress in Education (NAPE) 2010 also revealed that literacy in Primary three and primary six was as low as 47% and 40% respectively. Poor instructional methods have therefore caused learners not to internalize concepts and reason or analyze issues for themselves. Lack of meals has led to less concentration in class; and in some instances, dropping out of schools. In light of the above, therefore, it is recommended for government to ensure; The monitoring of the quality of teaching and learning in the schools; Employing more teachers to reduce on the teacher/ student ratio; Encouraging parents to provide meals for the children while at school; Identifying areas of focus for support supervision, school performance review and inspection; Training educational professionals at all levels within the system.

**Key Words:** Quality, attainment, numeracy and literacy.

**E2013-37 Non-Governmental Organizations’ (Ngos) Participation in Empowerment of Hiv/Aids Orphaned Children in Njoro District, Nakuru County, Kenya**

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The study has examined empowerment as a mean of enabling HIV/AIDS orphaned children to access socio-economic opportunities in order to make personal choices and have control over their own lives. The physical and emotional needs of HIV/AIDS orphans, such as nutrition and healthcare are important. Non-Governmental Organizations in Njoro District of Nakuru County have engaged in empowering HIV/AIDS orphaned children in Njoro District of Kenya for over 10 years, but little has been done in attempting to find out how these NGOs’ participation has empowered the HIV/AIDS orphaned children in the region. In the process, HIV/AIDS orphaned children have faced many challenges such as lack of balanced diet, which has led to malnutrition. Some of these orphaned children have lacked basic medical care and basic education. This article has adopted descriptive research design which involved observing, interviewing through open questions and describing the behavior of respondents without influencing them in any way. The purposive sampling method was used to get the sample size of 52 participants. Primary data obtained from the respondents confirmed that although much is given to the NGOs through the donors to reach the HIV/AIDS orphaned children in Njoro District, very little reaches them. The article recommends that, NGOs empowering HIV/AIDS orphaned children in Njoro District need to come up with new strategies of empowering HIV/AIDS orphaned children and ensure that they are implemented and working properly. Otherwise it is a waste of resources for the donors to give so much to these organisations yet they do not use them to empower those supposed to benefit from them.

**Key Words:** Empowerment, HIV/AIDS, Orphaned children, NGOs

**E2013-38 Development-Induced Displacement: Analyzing the Impact of Displacement as a Result of the Proposed New Port in Lamu**

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Development and displacement are contradictory, nevertheless occur alongside one another. In Kenya, neo-liberal policies aimed at development have displaced people in the sake of ‘national interest’. This study
focused on the consequences of development-induced displacement in Kenya, using the displaced context of the proposed new port in Lamu as a case study. It sought to establish the development problems faced by the development-induced displaces as a result of the new proposed port in Lamu. This includes all dimensions of development: social, cultural, political, economic and environmental. The theoretical framework for the study comprises of the following schools of thought: forced migration, human rights and human security. The study used a qualitative approach to analyze the context of development-induced displacement. It was found out that displacees uprooted from their homes will lose their land, livelihoods, social ties and lifestyles resulting in marginalization and disempowerment. The context of displacement and resettlement is further aggravated due to their lack of participation since inception of the project planning as they had no chance to present any comments or give their opinions on decisions concerning their lives. The research concludes that the impact of development-induced displacement is felt in the social, cultural, economic and environmental aspects. It establishes that the development-induced displacement context is not properly addressed in the proposed new port project in Lamu. There is an urgent need for an in-depth study to understand every aspect of displacement where the citizens who are or would be displaced can participate and give their comments so that the impact of displacement is minimized with appropriate compensation and relocation plans. Finally, recommendations aimed at durable solutions for the displaced are proposed.

**Keywords:** Development-induced displacement, Forced migration, Human security, Human rights, Development projects

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**E2013-40 Influence of Family Risks and Assets on Alcohol, Tobacco and other Drugs Behaviors among Secondary School Students in Kiambu and Nairobi Counties, Kenya**

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Family is the primary social context within which an individual is raised and socialized especially during childhood and adolescence. This means that a family bears directly or indirectly upon students’ behaviors. It is against this background that the current study sought to establish the relative influence of family risks and assets that predispose or buffer students to and from alcohol, tobacco and other drugs behaviors. The factor was considered risk or an asset if it had positive or negative correlation with the problem behaviors respectively. The risks included social economic status, siblings’ pro-drug attitude and use; and parental use. The family assets were family structure (intact versus non-intact); parental support (nurturance, attachment, love and responsiveness); parental control (supervision, monitoring, clear rules and discipline) and parental anti-drug attitudes. *Ex post facto* research design was used. Multi-stage, stratified proportionate, systematic and simple random sampling and purposive methods were used to select participating counties (n=2), district (n=8) schools (n=71) and students (n=1389). However, 1088 students were included at analysis as some were eliminated due to inconsistent responses and non responses. Self administered questionnaire was used to collect data on alcohol, tobacco and other drug behaviors, family risks and assets. Frequency, percentages, Chi Square and logistic regression were used to analyze data. Siblings’ pro-drug attitude was the highest risk for alcohol (1.7 times), bhang (1.8 times) and poly drug use (1.9 times). For smokeless tobacco (1.9 times) and khat use (1.8 times), parental use was the greatest risk. Sibling use was the greatest predictor of the students’ cigarette smoking (1.9 times). Parental control was the strongest asset that buffers the students from using
alcohol (2.5 times), cigarette (3.2 times), bhang (2.1 times) and khat (2.3 times) and poly drug use (2.4 times).

From these odd ratios, it was evident that students who perceived high parental control were 3.2 times more likely to be abstainers than users of cigarette. There was no statistically significant relationship in the assets with smokeless tobacco abstinence. These findings may be useful in prioritizing risk and asset targets for prevention and interventions programs for alcohol, tobacco and other drugs behaviors.

**Key Words:** Risk, Asset, Parental control, Parental support, Family structure

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**E2013-41 Mass Media and Society: More of Partners than Protagonists**

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Besides the negative effects of the Media, the society has benefited from the other transformative functions of the Mass Media. The media as an educational medium, correlation tool, public watchdog, socialization agent and information portal has changed the societal perception. Lately, a lot of research has gone into the concept of media as the source of problems in society more than it being a blessing. The paper subscribes to the Agenda-setting theory and borrows a lot from the User and Gratification theory to argue that media and society are at best friends and at worst protagonists. From a review of multifarious literature, the paper maintains that the media as a source of information and as a tool for education in society supersedes other functions ascribed to the Media. Ranging from the emerging intermediation, convergence and disintermediation, the Mass media industry has revolutionized in order to meet the ever-changing needs of the audience. The paper argues that the mass media has been known to effectively perform its functions in a condition of relative democracy and existence of press freedom. The paper thus concludes that the advent of new media (social media) has broadened the base of the media as a transformative agent in society.

**Key words:** New Media, Mass Media, Transformation, Society, Agenda-setting

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**E2013-42 Politics and Sensational Newspaper Headlines: Debate around Jubilee Government’s Laptops and the Teacher’s Strike?**

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Politics in Kenya is a heated debate and media houses cannot have news unless it reports on politics of the day. With the current competition for the audience, every newspaper scrambles to capture the attention of as many people as it can through headlines. In this case, a sensational headline is inevitable. Since Kenya is divided into two major political sides, newspapers have learnt to have their way out. This debate has never taken toll than during the controversial debate on whether the government should prioritize the promised laptops or redirect the already budgeted project funds to paying teachers. This article argues that although Kenyans are already divided, newspaper headlines are clear in their endeavor to divide Kenya more by giving commercial interest precedence to journalistic ethics. The study analyses a few newspaper headlines from the two leading national newspapers especially concerning the debate on the teachers’ strike versus the laptop project. Other issues that relate to the government spending and that oscillate around the debate have been analysed provided they are captured by the newspaper headlines. It is a content analysis paper and conclusions and recommendations have been drawn from the argumentation made by comparing available literature on the subject.
E2013-45 An Assessment of Aerobics Exercises on Dancing Skills as a Performing Art in Nakuru Fitness Centers

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This study investigates the effects of Aerobics on dancing skills as a performing art in fitness centres in Nakuru town. Physical fitness has long been considered the cornerstone of training, providing all the technical, physical and aesthetic requirements of dance as it plays a great role on the performance of dancers, yet it is becoming more challenging to attain the highest form of fitness to a level that our bodies can perform under optimum levels. Rather than the traditional running, walking, and cycling there are other methods of attaining this state, Aerobics included. The target population comprised of the dancers in Nakuru town who are enrolled in the fitness centers within the town. The study adopted the Solomon four – Group Design. It incorporated quasi-experimental designs by selecting the dancers as members of the four groups purposively. Pre test and post test were done by assessing the expertise in the dancing skills by a qualified choreographer. The treatment was the involvement of the dancers in the aerobics exercise classes. The analysis of the result was done using descriptive statistics through the help of Statistical Package for Social Science (SPSS). Findings from this research indicate that many dancers are not as fit and healthy as they should be. It has also been found that there is a discrepancy in the physical intensity level between training, rehearsal, and performance. This means that training methods, which are generally based on tradition, are not sufficient to help prepare dancers for the higher, more physically demanding aspects of performance. In the final analysis of the study, it is recommended that preparing dancers of different genres physiologically is important before training them for the demands of recent choreographic work.

Key Words: Aerobic exercises, Dancing skills, Performing art.


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This is a cross-sectional survey, interview based study to assess whether the attitude of secondary school students in Nakuru Municipality towards sexual practices, was in line with information reported of students elsewhere in literature. The study also tried to find out which factors influence the attitude of students towards sexual practice and to what extent. Study sample consisted of 291 students from five secondary schools in Nakuru Municipality. Two sets of questionnaires for teachers and students was used to collect data. Validity of the instruments was checked through expert opinion and reliability tested using cronbach reliability test after a pilot study. The data obtained was analyzed by use of descriptive and inferential statistics using SSP version 20. The findings of the study show that there is prevalence of permissive attitude towards sexual practices. There was no difference in terms of age and sex. Boys involved in more sexual activities than girls. Factors influencing students’ attitude toward sexual practices include mass media, peer pressure, contraception and parental indifference. The study recommends the provision of sex education and reproductive health education for students by parents, teachers and church to demystify sexuality.
E2013-47 The Role of Mass Media in Health Promotion in the Republic of South Sudan

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Communication theorists concur that the mass media has some effect on their audiences. There is no consensus, however, on the exact nature, extent or universality of this effect. One of the areas the mass media has great impact on is health promotion. Available evidence indicates that the media is an important ally in most health situations. The role of the mass media in health promotion has been a common research theme in many countries. However, little has been written about the role of the mass media in health promotion in South Sudan. This study investigated the role the mass media has played in health promotion in the Republic of South Sudan. The data for the study was collected through a survey research method using key informant interviews with health practitioners, government officers, the media and the general public. The findings indicate that the mass media in the Republic of South Sudan is the source of correct health information, promotes the uptake of health services, facilitates policy advocacy, supports health emergencies, and acts as an advocate for correct health behaviours. It also emerged that the media in South Sudan has not played these roles effectively because of poor infrastructure, poverty, inadequate technical skills among journalists, illiteracy, inadequate policy frameworks and inadequate media coverage. Training of journalists in health reporting, adoption of emerging mass media tools such as the Internet and social media, enactment of facilitative legal and policy frameworks, expansion of the reach of education and development of appropriate media systems can enhance the effectiveness of the mass media in health promotion in South Sudan. The findings of this study can be used in developing media relations programs in the health sector and for policy advocacy to support the expansion of the reach, quality and accessibility of health services in the Republic of South Sudan and other developing countries, especially in sub-Saharan Africa.

Keywords: South Sudan, Mass media effects, Health promotion

E2013-48 Contribution of Selected Family Factors on the Influx of Street Children: A Case of Nakuru Municipality

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The last decade has seen an unprecedented rise in the number of street children in Kenyan towns and the issue has raised concern in Kenya. A study done by the Attorney General’s Office in 1989 and 1991 concluded that Kenya was sitting on a “time bomb”. Numerous and complex socio-economic factors have been attributed to the rising presence of children on the streets. In spite of studies done by the African Network for the Prevention and Protection Against Child Abuse and Neglect in Nairobi, Mombasa and Kisumu in a bid to address the deep rooted and complex factors which contribute to the existence of children on the streets, their number continue to rise in Kenyan towns. Therefore, the purpose of this study was to investigate the contribution of selected family factors on the influx of street children in Kenyan towns with special reference to Nakuru Municipality which has a population of about 3,800 street children with 800 of these in rehabilitation centers. The research design used was descriptive survey that used an ex post facto design. Nakuru Municipality has eight active rehabilitation centers for street children. Having used one center for piloting, five centers were randomly sampled from the remaining seven centers. A total of twenty street children were randomly selected from each selected rehabilitation center and five managers were selected purposively from the centers selected. This provided a sample of one hundred street children and five managers of the institutions. Questionnaires
were administered on the selected street children and managers of the institutions were interviewed by the researcher. After successful data collection, the data was analyzed using the Statistical Package for Social Sciences (SPSS) version 11.5. Descriptive statistics, frequencies and percentages were used to describe the raw data. The main findings of the study were that factors within the family such as family type, inability of parents to provide for their children, child abuse, parent’s drunkenness and poor parent-child relationship, have contributed to the street children phenomenon. Further information revealed that family counseling can be used to assist the families of street children. Based on the findings, the study concluded that there is need for intense advocacy of the rights of the child and the family unit should be assisted so that it can be able to take care of its members. People and communities can also be made to understand the importance of their involvement in caring not only for their children but also for those who have no parents.

**E2013 - 49 Blended Learning in Higher Education: Learners’ Preferences and Insights**

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This study was conducted on the prevailing learners’ perceptions and preferences towards Blended Learning in Higher Education. This was a case study involving one private University in Kenya. The purpose of the study was to assess the learners’ perspectives of Blended Learning, identify their experiences and make recommendations for improvement of program design and delivery. The study design adopted a mixed research approach and was situated within Garrison (2008) theoretical framework of Community of Inquiry (CoI). The research addressed the following research objectives: What are the reasons for choosing the Blended Learning program? What are the learners’ perceptions towards the quality of preparation and delivery of blended learning programs? How do learners compare the Blended Learning and traditional classroom learning? What are the suggestions for the future development of Blended Learning? Participants were drawn from cohorts of learners enrolled at different stages of study in the Blended Learning program at the University. A purposive sampling technique was used to identify participants. The participants responded to the questionnaire that was emailed to them by their course instructors. The completed questionnaires were subsequently emailed back to the researcher. Analysis of data was done using descriptive and inferential statistics. Pearson-Product moment correlation coefficient was used to describe relationships between variables. The findings from the study indicate that when there is greater social and teaching presence, learner’s satisfaction increases. Provision of support in terms of teaching presence and instructional resources needs to be enhanced. Facilitators of Blended Learning courses have to be more proactive and initiate frequent online discussions to enrich their courses.

**Keywords:** Blended Learning, Higher Education, Perceptions, Challenges

**E2013-50 Blended Learning in Higher Education - Perceptions and Preferences**

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Rapid expansion in university education has precipitated increased enrollment and highlighted issues of access and quality in the delivery of a variety of programs. Subsequently, Universities have embraced ICT in the delivery of instruction. The use of Blended Leaning has gained prominence in recent years. However, there are few studies conducted in Kenya on Blended Learning mode of delivery. This research study evaluated the prevailing learners’ perceptions and preferences towards Blended Learning in Higher Education. The purpose
of the study was to assess the learners’ perspectives of Blended Learning, identify their experiences and make recommendations for improvement of program design and delivery. A case study approach was used involving one private University in Kenya. Purposive sampling technique was used to identify participants. The study design was a descriptive survey. Participants were drawn from cohorts of learners enrolled at different stages of study in the Blended Learning program at the University. The participants responded to questionnaire that was emailed to them by their course instructors. The completed questionnaires were subsequently emailed back to the researcher. Analysis of data was done using descriptive and inferential statistics. Pearson-Product moment correlation coefficient was used to describe relationships between variables. The findings indicate that learners’ perception towards blended learning is very positive. The support provided by instructors was the single most important determinant of learners’ satisfaction with the blended course. Other key factors included instructor’s preparation, adequate resource provision, and flexibility and learner interaction. Learners recommended increased online discussions and active discussion forums to increase learner participation. Preparation for course instruction was highly recommended.

**Keywords:** Blended Learning, Higher Education, Perceptions, Challenges

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**E2013-52 Evolving Role of Social Networking on University Education Performance in Kenya: A Case Study of Multimedia University of Kenya**

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Frequent technological innovations have increased the desire of students to adopt new technologies in their learning processes. The purpose of the study was an investigation of the impact of web 2.0 technologies on higher education: a case study of school of computing and information Technologies, Multimedia University of Kenya. The study focused on two objectives which include determining the extent to which Web 2.0 technologies motivate students to engage in their learning and to find out whether the use of Web 2.0 tools is perceived by students to be useful in their learning processes. The research design that was used in this study was a descriptive survey case study design to investigate the impact of Web 2.0 Technologies on Higher Education at School of computing and information Technologies, Multimedia University of Kenya. From the findings the following conclusions were made, Institutions of higher learning in Kenya is increasingly using Web 2.0 Technologies to enhance learning experience. Adaption of latest technologies for example Web 2.0 in higher education is important for institutions of higher learning in Kenya. Frequent technological innovations have increased the desire of students to adopt new technologies in their learning processes. There is a need to continue with encouraging students and teachers to continue using web 2.0 technologies for teaching and as teaching aids. The adaptation of web 2.0 technologies should be encouraged as it brings new ways of using the web and improve on various skills by learners.

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**E2013-53 Frequency of Nutritional Counseling Services: Does it have any Value on the Adherence to the Dietary Therapies among Diabetic Patients in Nakuru County?**

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Nutritional counseling is arguably the best approach in the treatment of diabetic patients. However, the stakeholders have not paid enough attention to it and therefore, diabetic treatment continues to pose
challenges among patients. In most cases, the counseling is done limitedly and scantily so that patients have no deep understanding of what is required of them. If the services are offered frequently, there is likely to be better results on the dietary treatment therapy adherence. This article argues that the frequency of Nutritional Counseling Services affects the adherence to the dietary therapies among diabetic patients in Nakuru County. In order to have the study carried out successfully, a descriptive survey with ex-post facto design was used to assess the effectiveness of nutritional Counseling services. The sample consisted of 283 respondents that included 8 dieticians and 275 diabetic patients. Stratified random sampling where the total population was split into two distinct samples (diabetic patients and dieticians) based on their demographics. Expert judgment was used to improve on content and construct validity of the items. The Statistical Package for Social Sciences (SPSS) was used to analyze the data. The study found out that there was a statistically significant link between the frequency of nutritional counseling and adherence to dietary therapy by diabetic patients. This study recommends that frequent counseling services should be offered in hospitals and employing more dieticians, intensifying awareness campaigns on the recommended diet for the diabetics will be a significant step.

**E2013-54 Peer Sexual Harassment in Higher Learning: A Study of Forms, Prevalence and Perception**

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Most existing research in Kenya has examined sexual harassment in non-academic settings and any studies conducted in universities focus on the context of explicit power differential. Institutions of Higher Learning sustain development in Africa through professional human resource capacity building. Investigating harassment on campus would therefore increase understanding of the mechanisms perpetuating it and boost the potential for successful endeavors aimed at controlling its incidence in all settings. This paper explores the major forms and prevalence of sexual harassment on campus. It also looks into the general perception that students have concerning harassment. In a cross sectional survey, a sample of 389 respondents generated through multistage sampling procedure filled a questionnaire on sexual harassment. The research yielded a reliability coefficient of 0.79 which implies high reliability. Descriptive statistics revealed that two thirds of the university students had been subjected to sexual harassment before joining campus. Quantitative statistical analysis yielded a 3.3 prevalence index on a 5-point Likert scale implying that peer sexual harassment was significantly prevalent among students in academy. A contingency table generated from 43 items measuring perception of sexual harassment yielded an overall index of 3.83 which is high. Many of the respondents acceded to have been subjected to sexually harassing behaviours but were resistant to label themselves as survivors of sexual harassment. Gender, age and year of study did not significantly influence perception or reaction to the experience of sexual harassment on campus. Recommendations for the improvement of the situation to create a freer and safer Kenyan campus environment as well as suggestions for further research are made.

**Key words:** Sexual harassment, Higher learning, Prevalence, Perception, Consequences

**E2013-55 Stress Experiences and their Contribution to Students’ Performance in Biology in Mixed Secondary Schools in Kiambaa Division of Kiambu County, Kenya**

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The modern world, which is a world of achievements, is also a world of stress. One finds stress everywhere,
whether it is within the family, business organization/enterprise, the school or any other social economic situation. Stress can be absolute (a real threat leading to a significant stress response in every person facing the threat) or it can be relative (an implied threat induced by the interpretation of a situation as being novel, and/or unpredictable and/or uncontrollable) that can impair academic performance. Stress hormones that are secreted in response to an absolute or relative stressor are steroids that can easily cross the blood–brain barrier and access the brain, where they can influence learning and memory by binding to receptors localized in various brain regions known to be involved in learning and memory. In the last five years there has been poor performance in biology in Kiambaa Division of Kiambu County. There is a gap in analysis of relationship between stress experiences and their contribution to students’ performance in biology in secondary schools in Kiambaa Division of Kiambu County. The study focused on 25 schools whose population is 11,020 students according to 2011 enrolment. The study employed an exploratory approach using a descriptive survey design with target population of all 25 secondary schools and a sample of 187 students from of 20% of the schools in the division and 50% of all the form three students taking biology in each school. A correlation of stress levels and biology scores of -.549 significant at .01 confidence level was obtained using Spearman’s rank order correlation. This qualified reject the null hypothesis Ho1; There is no relationship between levels of stress from stressful events experienced in the last one-year and performance in biology by secondary school students in Kiambaa division of Kiambu County.

**E2013-56 Study Engagement and Academic Burnout in University Students**

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Academic burnout in students is an issue of concern due to the various demands of university life and the probable adverse impact on their learning and well-being. Research has focused upon examining various aspects of students’ lives, such as academic studies and achievement, but little has been done with regard to students’ academic and mental wellness. This paper addresses the relationship between study engagement and academic burnout in university students. A cross-sectional survey was carried out on 102 undergraduates. Data was collected using a structured questionnaire that included socio-demographic items, Maslach Burnout Inventory - Student Survey and Utrecht Work Engagement Scale. High means were found at the dimensions of reduced professional accomplishment. Burnout components were negatively correlated with engagement variables. In addition, burnout was higher among older students, male students, and those who were registered in part-time study programme than younger students, female students, and the regular programme students, respectively. Since understanding student mental wellness could hold a light to a range of possible student attributes and the prospects of students’ relationship with their academic institutions, lecturers and administrators of universities would benefit from considering the results of this study to increase their awareness of related problems for their students. Burnout has an importance in academic and social life because it could be a putative factor in the development of institutional student discords, drug and alcohol abuse, insomnia and fatigue. It also has deleterious effects on academic productivity and performance by lowering academic performance, study satisfaction, and educational commitment and quality of intellectual output. Therefore, when the factors that propagate burnout in our institutions are recognized, strategies for its prevention and mitigation are easy to improve.

**Key words:** Study engagement, Academic burnout, Higher education
**E2013-57 Preconception and Prenatal Care among Women of Reproductive Age: A Case of Kigumo District, Murang’a County**

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Preconception and prenatal care has been known to contribute to healthy pregnancy outcomes, however there is little information on the care taken by women of reproductive age before and during pregnancy. This paper presents the findings of a study carried out to assess preconception and prenatal care among the reproductive women in Kigumo district, Murang’a County. The study targeted women of reproductive age (15-55 years) in Muthithi and Kahumbu locations. A total of 360 women participated in the study which adopted a cross-sectional design. Semi structured questionnaires were administered to the respondents and two key informants interviewed. The data was subjected to Statistical Package for Social Sciences (SPSS) for analysis. The study revealed that only 15% of the reproductive women attended the antenatal clinic in their first trimester and only 10% consulted health care providers for preconception care and advice. At least 16% knew their weight while only 6.4% of the respondents were aware of their body mass index. It was noted that the village birth attendants were still important since 22% of respondents cited them as the most important people to them when giving birth. The reason contributing to the level of care taken by the women of reproductive age is multi-factoral however key among them is education. The results showed that though pregnancy is one of the most important stages of one’s lifecycle, it is not accorded the care it deserves and this contributes to the negative outcomes. Therefore there is need for nutrition education on the importance of preconception and prenatal care among the women of reproductive age.

**Key words:** preconception, prenatal, women of reproductive age, Kigumo, pregnancy

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**L2013 SYMPOSIUM 3 - LAW**

**L2013-01 Court Interpreters Accommodation Strategies in Kenyan Courtroom Communication: Evidence from Subordinate Courts in Nyanza Province.**

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In the domain of interpretation and translation studies, this paper describes the role of the court interpreters in courtroom communication by analyzing the accommodation strategies detected in the court interpreters' renditions. The court interpreters play a very pivotal role in courtroom communication in cases where the interlocutors do not understand the official language of courtroom communication. The constitution bestows upon English the official functions of language yet there are those who do not understand English as the official language of the courts. In order to aid understanding, the courtroom interpreter negotiates interaction between the two languages in such a way that the interlocutors participate in this important interaction. In so doing the interpreter acts as a language rights practitioner. This paper therefore seeks to describe the accommodation strategies employed by the court interpreters as language rights practitioners. Communication Accommodation Theory (CAT), which is a prominent framework for the analysis of linguistic exchanges, is used to analyse the data. CAT allowed us to identify the instances of convergence or divergence in the specific interactions and highlighted how convergence and divergence strategies in courtroom examination were achieved by the interpreter. A descriptive survey design involving an analysis of audio-recorded court cases was done. An analysis of interpreter-mediated conversation was done by transcription of the discourse.
CAT provided a valuable framework for analysis of the linguistic behaviour of the interpreter. The paper reports that the interpreters use both convergence and divergence strategies in courtroom interpretation. This paper recommends that the interpreter understands courtroom communication in order to interpret accurately.

Key words: Court interpreter, Language rights, Convergence, Divergence.

L2013-02 Governance and Leadership
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Since independence, Kenya was established as a constitutional state with the constitution as the grundnorm. After independence, the country adapted what is widely referred to as the “Lancaster/independence constitution.” In the 47 years that followed under that constitution, the country went through periods of abused democracy, disregard to constitutionalism and transition from single partysim to multipartysim. In that period, Kenyans lost faith and hope of acquiring good governance and proper leadership and a cloud of despair and despondency engulfed the nation. Attempts to put in place a new constitution and change the modus operandi had proved futile. With the enactment of a new constitution in 2010, Kenya is a country that is pregnant with expectations of good governance, leadership that illuminates integrity, end of corruption and equitable distribution of wealth; panacea- in a nutshell. Interviews, surveys and questionnaires were used to gather data and interrogate the findings. Our key findings were: with the enactment of the new constitution and its provisions such as chapter six; leadership and integrity, Kenyans have increasingly high hope for the future. Secondly, the interviewees were emphatic about the role of integrity in leadership. In conclusion, as interested citizens in the issue of leadership and governance, we find that integrity, accountability and good governorship are pre requisites of good governance and progressive leadership. We recommend putting in place of stringent measures to ensure the full implementation of the constitution and those charged with the responsibility of implementation uphold the spirit and letter of the constitution.

L2013-03 Causes of Kenyan Police Officers Extrajudicial Killings and Suicidal Tendencies
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Police extrajudicial killings and suicides have become a matter of grave concern in Kenya. Hardly a month elapses before hearing of police killings or suicide cases. At one time the government of Kenya set up a task force to find out what the trigger of these killings and suicide was and recommendations were given, but despite that, the vice is on the increase. It is for this reason that the researcher carried out a study on the causes of police killings and suicidal tendencies. The target population was Kenyan policemen. A sample of 220 policemen was used in the study. Questionnaires and interviews were used to collect data and analysis of data was done using the Statistical Package for Social Sciences (SPSS). The findings indicated that the following were the causes of police extrajudicial killings and suicide: harsh training environment for police recruits, trigger happy policemen, inhuman treatment of junior police officers by seniors, subjugation of juniors by senior officers, posting of police officers to highly volatile stations without proper equipment for the task ahead, projection of anger on innocent people, juniors taking orders from seniors without questioning even when it is extremely inconveniencing, senior police officers intrusion into junior officers’ family affairs, housing conditions of officers in deplorable state and lack of privacy as well, accessibility of firearms. The recommendations were: the senior police officers to treat their juniors well, police officers to be well equipped
when going for dangerous operations, seniors not to intrude into junior officers’ territory and interfere with their families, senior officers to be understanding towards the plight of junior officers.

**Keywords:** Extrajudicial killings, Suicide, Firearms, Police Officers.

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**L2013-04 Electoral Reform: Extinguishing Ethnic Hegemony in the Executive**

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Kenyan politics and ethnicity are inextricably linked and this became more evident in the 2013 general election where ethnicity, ethnocentrism and ethnic hegemony played a crucial role in determining the Presidency of the Republic of Kenya. What was disquieting about this was the fact that the Presidential election was determined by two regions-Rift Valley and Central province and two ethnic groups- the Kikuyu and the Kalenjins to the exclusion of all the other 40 ethnic communities and 6 provinces and later famously dubbed “the tyranny of the numbers”. The 2013 election unraveled deep flaws in our electoral system that points to the beginning of a vicious circle of tribal imperialism by either the two communities who through formation of an ethnic hegemony will always win the presidency. It is apparent that the political problems that Kenyans now face emanate from the superficial notion that equity abounds in our electoral process. The cosmetic and ineffective provisions of the Constitution of Kenya 2010 only add to the dilemma as they can only lead to stalemates. This discourse will try and evaluate the need of electoral reform in Kenya and more so assess the viability of constitutional amendments and the electoral college system that will divide electoral votes amongst regions and negate the possibility of two regions ever determining the outcome of such an election and subsequently will give other communities an equal chance of occupying the presidency and of asserting their need to make their vote count.

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**L2013-05 Legal Education, Training and Research**

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While it may be argued that Legal Education, Training and Research are imperative in a lawyer’s training, it is also important to acknowledge that their standards have progressively dropped. Therefore this advances a concern on why this is trendy given the position that the legal profession has for a long period produced competent lawyers and/or advocates who equally impact knowledge on their parallel legal scholars. This research searches to explore basic tenets of Legal Education, Training and Research by comprehensively tackling the developments, pitfalls and realisations. By this, it will enable the interested populaces not only to recognise the ambiances of the legal realm but also their nexus to the normal world. Equally, this will act as an extension to address the lacunas that may exist thus contributing to the fall back of the profession. With this research, it is expected that the legal profession will propel to reasonable heights thus will help upcoming training lawyers to set a good ground for their career. It will also trigger other legal scholars to contribute to this subject matter in order to come up with a water tight solution to better the legal profession. This research recommends that the experience and expertise that qualified lawyers have is of essence in this endeavour to promote the Legal Education, Training and Research. It is therefore incumbent upon us to realise the omitted loopholes and unsealed lacunas and address them effectively in order to have a proficient profession.

**Key Words:** Legal education, legal training, legal research, search engines, legal citations; and, sources.
L2013-06 Demystifying Devolution under Kenya’s New Constitution: The Need to Avoid Pitfalls

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The need for taking services closer to the people is the motivation behind decentralizing government functions to the devolved units. While this is generally a noble idea, the success of this works on the assumption that devolution brings about effectiveness in service delivery, which may not be always the case. This is because the ineffectiveness, inefficiency, misappropriation of funds and corruption at the national level may simply “dissu” to the counties with detrimental effects. Basing its argument on literary works, the paper argues that while Kenyans were optimistic about devolution, a reason they approved the New Constitution in 2010, a majority are starting to despair and some are completely pessimistic about the chances of success of devolution in Kenya. Borrowing from the Elite’s theory, it warns that unless the political elites in Kenya are closely watched and held accountable by the citizens, they may usurp the provisions of devolution, as provided for in the constitution, for their own selfish interests. While this does not negate the essence of devolution, it concludes that an informed public participation is crucial for the success of decentralization and devolution as envisaged in Kenya’s new constitution.

Key Words: Constitution, Decentralization, Devolution

L2013-07 Effective Gender Empowerment for Kenyan Women

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Kenyan women have been citing several obstacles to their empowerment and participation in public governance (including cultural and legal prejudices, lack of adequate funding and passive government institutions, etc) which have been tackled positively under the new Constitution and through aggressive pre-election Civic Education programmes. However the recent 2013 General Election indicate that Kenyan women have not transformed their majority numbers into dynamic and legislative power brokers. This emerging reality has created a puzzling question about the lingering flaws in our national strategy for gender empowerment – is this problem inherent within the legislative framework or within the women candidates themselves or within our general expectations and interpretations. Eye-witness sampling was done in Kirinyaga County for leadership experiences (candidates) and electoral perceptions (voters) for the purpose of establishing the ground impact of the new Constitutional/legislative/civic campaigns. A comparative study of effective gender empowerment based upon historical women in the Bible (Deborah) and in the Catholic Church (St. Theresa of Lisieux) and Global Contemporay (Immaculee Ilbugiza) was done. The study establishes that there is need for a winning formula that will help emerging women leaders to become more effective and practically relevant within the African context and legal systems. It concludes that, effective gender empowerment seems to favour the “grassroot” model that builds from the periphery towards the center (quality and localised) rather than from centralized legislation (quantity and pyramidal).

Key words: Credible Traction, Quality, Natural Selection
L2013-08 Whence Devolution and County Governance in East Africa: An Analysis of Governance Best Practices in Selected Local Authorities in the East African Community Countries

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A salient plank of the new constitution in Kenya and generally of the governance and development agenda in the region is devolution and decentralization of services to make them not only closer to the people but indeed to facilitate the participation of citizens and other Non State Actors (NSAs) in the planning and decision making process as well as in the conceptualization, design, implementation and Monitoring and evaluation of requisite development programmes. The study sought to identify and document governance practices that are at the cutting age of the governance agenda and which replicate governance benchmarks and best practices internationally. The study identified four thematic areas under which governance best practices were analyzed. Selected Local Authorities (LAs) were approached to share programmes that fall within one or more of these thematic areas. These were analyzed for selection against set criteria. In addition, members of the public within the jurisdiction of the selected LAs were interviewed to verify the information given by the LAs regarding service delivery and governance practices. This was also intended to gauge the citizens’ preparedness to play the oversight role and hold leaders and institutions to account. The findings show that LAs have identified near similar governance issues in the management of LAs. Therefore, programmes that have worked in one LA can be replicated in another in the same or neighboring country; hence the term regional governance best practices. In this vein, the study illuminates six governance best practices in the region. Similarly, the study has identified challenges that impede citizen participation that require to be addressed in order to maximize benefits to citizens and make programs more responsive, accountable and sustainable. Consequently, the study has made a raft of recommendations to improve the governance environment in the region.

Key words: Governance, Devolution, Citizen Participation, Best practices

L2013-09 Effects of Intellectual Property Rights (IPR) in the Information Society

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The right to own one’s genius is not a new concept. However, with the arrival of the digital age, it has become much harder to remain in control of one’s intellectual property. Intellectual property has grown from the need to protect one’s new invention; Knowledge is a stimulus for innovation, particularly in knowledge-based technologies where large shares of technical know-how are embedded in final goods. Information goods are described as public goods: if information is disclosed to the public, its originator loses the advantages of propriety, but a new generation of know-how and ideas is stimulated and expanded as a result of its publication. The paper examined the effect of intellectual property rights in the information society. The study involved content analysis of existing literature on the subject of Effects of Intellectual Property Rights (IPR) in the Information Society. The methodology was found to be appropriate since the subject under study could not be measured using available data both primary and secondary and so the researcher relied on statistical and authority of other scholars. Key finding was that unlike physical property, intellectual property (ideas) isn’t tangible and so enforcing intellectual property laws as they stand now is morally problematic. A dialogue should begin regarding what sort of laws we need to promote the public good, citizens’ moral character, what the rights and duties we have toward each other, etc. There are alternatives to the way we currently handle intellectual property (for example, not acknowledging its existence), and they would be part of a comprehensive
pursuit towards a more ethical legal and/or social system. Anything short of discussing the ethical implications of intellectual property in the context of evaluating its worth would be short-sighted.

**L2013-10 Investigating the Legal Implications on Wetlands Management in Kenya**

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Investigating the legal implications on wetlands management in Kenya. Wetlands in Kenya are broadly covered under the environment management programme. Environment is a crucial sector in Kenya and generally defines how individuals within a particular society interact with the physical environment. Indeed so much has been done and much needs to be done in order to protect this precious environment. The paper tries to gain a deeper insight by unraveling some of the existing facts about management of these wetlands across the country. It gives out the instances where efforts were lodged in pursuit of healthy wetland ecosystems attributed to water purification, flood control, shore stability among others. The paper concentrates in totality trying to analyze and examine the existing policies, legal and institutional frameworks governing environment in Kenya. It discusses some of the environmental policies formulated to prevent or manage the wetlands in the country and also to establish if the policy goals were ever attained. Under the legal framework, the paper actually reviews some of the laws governing the wetland management among them the Environment Management and Coordination Act 1999 in Kenya and some of the successes and drawbacks associated with them. The methodology employed in the paper involve collection of data through the secondary method whereby existing literatures were critically analyzed in order to gather a more relevant and current information concerning the management of wetlands in Kenya. Journals and other published articles on environment were very instrumental on the paper. The paper through the reviews of different published works on the same, established that indeed much still needs to be done for the betterment of the environment we are living in. actually, the users of the environment in some instances failed to understand that the same environment they abuse is badly needed by the other generations coming after us. It therefore warrants a strict implementation of the principle of equity that will ensure that the coming generations benefit too from the same environment.

**Key Words:** Wetland, Environment Management and Coordination Act 1999, Principle of equity, Environment, Policy, legal and institutional frameworks

**L2013-11 Formulation of a procurement policy on the East African States**

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The hampered growth of the east African states has been propelled by the weaknesses in the illiteracy levels, business environment, information infrastructure and a filthy political climate. The unfathomable lack in financial transparency by the governments has made the prophecy of a million tycoons and 10 million beggars come a reality. The unrelenting thirst for power by politicians in our region explains why procurement at the national level is a daunting treasure. This paper seeks to demonstrate the need to synchronize the procurement laws of third world countries with a specific screening of the east African countries’ policies in fostering economic development. Over the past few years, economic development has seen sluggish growth, falling short of expectations which can be attributed to various impediments that would have otherwise achieved this growth, legal reforms notwithstanding. Procurement has proved rather a daunting endeavor, save for the corrupt officials among member countries in fostering trade and spurring economic development, the loopholes in this laws has created a haven for corruption and has thus thwarted the expectations of
people as it has hindered its purpose. This paper thus seeks to address these issues and tries to innovate a procurement policy that will eliminate this vices. However, the innovation climate in developing countries is, by nature, problematic, characterized by poor business and governance conditions, low educational levels characterized by mediocre infrastructure. At the international trade level, the use of incentives and regulations: the role of foreign direct investment in developing countries and technological development trends adversely affects the procurement process. A procurement policy entirely built upon a comprehensive innovation policy will expedite the awakening of the tranquilized economies.

**Key words:** Procurement, Economic Development, Innovation Policy

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**L2013-12 Why Grey?**

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The independence of the judiciary is not entirely what it seems to be. It has been witnessed over the years that this concept has severally been interfered with by politicians, either directly or indirectly. The purposes for the strict principle of separation of powers, the concept of constitutionalism and the rule of law are heavily threatened by the negative political influence on judicial independence. Judicial independence is the concept that the judiciary needs to be kept away from the other branches of government. I believe that the three doctrines; separation of powers, constitutionalism and rule of law serve a purpose in trying to deal with the common problem of corruption in various entities. If judicial independence is not attained, then these three doctrines are somehow challenged. There are two methods of corruption of the judiciary: the state corruption which is the most dangerous and it is achieved through budget planning and various privileges, and the private corruption. The former makes it impossible for any business to optimally facilitate the growth of national market economy. One may adopt a scholarly method in trying to argue on judicial independence. For example, Sardar Mohammad’s literature, “a truly independent judiciary has three major characteristics. First, it is impartial, that is, judicial decisions are not influenced by a judge’s personal interest in the outcome of the case. Second, judicial decisions, once rendered, are respected, specifically by the executive. And third, the judiciary is free from interference that is by parties to a case or by others with an interest in its outcome. According to the Constitution of Kenya, 2010, article 160(1), the judiciary shall be subject only to the Constitution which is the supreme law as stipulated in article 2(1) and the law and shall not be subject to the control or direction of any person or authority. There is also a consensus among the scholars on certain factors ensuring the existence of judicial independence which include formal, legal and constitutional safeguards like impartial appointment process of the judges, their removal through impeachment only, security of their tenure, rigorous qualifications or experience, financial autonomy and a delicate relationship of the judiciary with other political and legal forces. The doctrines; constitutionalism, separation of powers, rule of law and judicial independence are all interconnected when it comes to corruption in various entities.
S2013 SYMPOSIUM 4 - SCIENCE

S2013-01 Survey of Diplostomum species (Digenea: Diplostomidae) infesting Nile tilapia (Oreochromis niloticus L.) in western Kenya

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*Diplostomum* species metacercariae are trematode parasites that pose serious economic threats to aquaculture practice globally. Identification of *Diplostomum* at metacercariae stage has remained vague, hence lack of elucidation of the actual role of these species in fish population. About 21 Diplostomid metacercariae obtained from eyes of Nile tilapia were characterized using 18S and ITS rDNA (ITS1-5.8S-ITS2) genes. ITS rDNA gene revealed five genetically distinct *Diplostomum* species within the fish population (*D. mashonense*, *D. baeri*, *D. pseudospathaceum*, *D. paracaudum* and *D. mergi*) whereas 18S rDNA gene revealed only threespecies (*D. compactum*, *D. phoxini* and *D. spathaceum*). Overall, this study showed the existence of different species of *Diplostomum* parasites in the area and the need for further research to assess the risk of this infection in aquaculture. Further research on the genetic diversity of *Diplostomum* using cytochrome c oxidase 1 (COI) markers must be considered in order to disseminate results for comparison purposes.

**Key words:** 18S rDNA, Internal Transcribed Spacer Region, Species identification

S2013-02 Assessment of the Factors that Influence Internet Service Providers in Application of Technology Push Strategy in Kenya: The Case of Jamii Telecom Limited

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Innovation is considered the life-blood of competitiveness and is central to the wellbeing of societies by ensuring creation of better or more effective products, processes, services, technologies or ideas. The initiative behind innovation is considered to either occur because of research and invention (technology push) or due to user’s needs expressed through market demand and other channels (demand pull). A lot of resources are being wasted on risky technology related investments, with much more being spent on marketing of the innovations which have no clear demand. This study assessed the factors that influenced Internet service providers in applying a technology push strategy in Kenya. A descriptive survey design was used in the study where both employees and customers of Jamii Telecom Limited (JTL)participated. Questionnaires and interviews were used to gather the data to add on to what was collected from secondary sources and descriptive and inferential statistics used to analyze the data. The study found out that all of the five factors being tested had a significant influence on technology push and also contributed to technology push; science and research & development contributed 15.1% (R² = 0.151) to technology push and had a Beta of 0.08 (significance of 0.004) demonstrating the level of influence on technology push, availability of new technologies contributed 19.4% (R² = 0.194) and had a Beta of 0.346 (significance of 0.003), availability of funds contributed 14.9% (R² =0.149) and had a Beta of 0.135 (significance of 0.003), entrepreneur’s creativity contributed 9.4% (R² = 0.094) and had a Beta of 0.004 (significance of 0.001) and while collaboration with research based institutions contributed 6.9% (R² = 0.069) and had a Beta of 0.242 (significance of 0.003). It was also revealed that some demand pull factors were also considered in innovation activities and these included; increased pressure from competitors, new demands from customers and emerging opportunities to enter new markets or to expand sales. It is expected that this study will help shed light to other organizations on innovation strategies and also
contribute to innovation studies in the dynamic telecommunications industry in Kenya.

**S2013-03 Heavy Metal Exposure To Residents Residing In Informal Settlement: A Case Study Of Residents In Nakuru Municipality, Kenya**

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The study was conducted with the aim of determining the level of lead exposure to residents living in informal settlement of Nakuru e.g. slum areas, areas proximity to sewage sites, and areas close to waste dumpsites of Nakuru Municipality using a sample of 120 individuals. Cross sectional study design, was adopted where a representative proportion of the population at different age groups were included in three sites, viz: dump site, slum areas and sewage prone areas. Human hair was collected from respondents at barber shops and health centres for testing level of lead exposure using Atomic Absorption Spectroscopy tests, after wet acid digestion using Nitric acid analytical grade. Incidence of presence of or absence of lead in the samples were estimated using binominal distribution. Result indicate that the incidence proportion of presence of lead in samples were 0.45±0.106; 0.17±0.064 and 0.29±0.057 for 0-6, 6-17 and >17 years of age respectively. GLM procedure on SAS showed that chemical levels in the samples picked from people residing close to the Dump sites had a significantly (p ≤ 0.05) higher levels of lead in their bodies than other sites. There was no interactions between age group and sites. There was a significant (P ≤ 0.05) among sites with majority of those sampled from dump site having 5µg/l. 40% lead levels followed by slum areas and lastly in sewage prone.

**Key words:** Heavy metal lead, AAS, Sampling, Binomial distribution.

**S2013-04 Mobile Interactive Messaging System for Patients in Collaboration with Health Workers**

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Health issues in developing countries are becoming more serious day by day, as different diseases attack and infect people making the public health sector overwhelmed. This has made it difficult for health workers to accurately study the trend of different diseases in many cases, thus failing to analyze the way patients behave after being diagnosed. The number of people who possess mobile phones is increasing every year and this can help facilitate communication in different geographical locations that may hinder movement of the health workers. The initiative to introduce the use of interactive messaging system is for patients who wish to access health services such as doctoral appointments and consultations or need monitoring but are faced by challenges like; the time needed to make for appointments and consultations, patients monitoring and halving to travel for long distances to reach the facility. Therefore the researcher designed and prototyped a mobile interactive messaging system that would enable patients to send their preliminary symptoms to the health workers in Kenyan public hospitals via SMS through mobile phones. With regard to the wide spread usage of mobile telephony today, the researcher chose to use the technology since she anticipated it would reach a large population. An interactive messaging system for patients’ collaboration with health workers is a system that uses mobile phone technology that enables communication between patients and health workers. This system will serve both the new and continuing patients. The health workers will monitor the progress of continuing patients, while the new patients send their preliminary symptoms to the health workers via SMS. All this information is stored in database residing at the health facility, which will serve as a reference point to the health workers as they respond to the messages received and patients will be able to effectively collaborate.
with the health workers without necessarily having to visit health facility.

**Keywords:** Interactive messaging, Health workers, Monitor, Prototype and SMS

**S2013-05 Efforts towards Increased Forest Cover as a Measure to Mitigate Effects of Climate Change**

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Global climate change is possibly the greatest environmental challenge facing the world this century. A major cause of the same is as a result of anthropogenic activities among them deforestation. Efforts have been put in place by the government, NGOs, Private sector and individuals to increase the forest cover to the internationally recommended 10%. Increased Forest cover will result to large base upon which there is storage of carbon stocks as Forests and Forest soils are very significant in carbon sequestration. A research was conducted in the Likuyani district among the communities surrounding the Turbo Forest to determine efforts communities are putting into place to help increase the forest cover that will in turn mitigate the effects of climate change. Household surveys using structured questionnaires were used to determine farmers who have put in place measures to plant trees, types of trees planted and management practises done on the Forests to promote their growth. It was established that majority of the farmers/individuals (92%) in the area responded well to tree planting. At least every homestead has a few trees for varied reasons. 85% of the respondents plant trees as wind breakers while 10% do that for beauty/aesthetic. It was interesting to find a number of small scale tree nurseries undertaken by some farmers from where the other farmers buy their seedling for planting. It was noted that the limiting factor to tree planting was the small size of the farms the farmers have which are mainly used for crop farming and livestock keeping. A good number of the farmers plant their trees along their farm boundaries for wind breaking and in their compound within their homesteads for shade, fruits, aesthetic e.t.c. Only one home stead (1%) did not have a single tree.

**Key words:** Forest Cover, Climate Change, Carbon sequestration, Mitigation

**S2013-06 The Role of African Cultures in the Conservation of the Environment: A Philosophical Perspective**

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The duty of conserving the environment has, in the past, been regarded as a job that is exclusively reserved for the environmentalists alone. This paper observes that there is no particular individual human being or group of human beings that is only endowed with the obligation of conserving the environment. Rather every person or groups of persons irrespective of their culture, race, creed or level of education is/are obligated to do this noble duty. African cultures in particular and the environment have been perceived by most people as being mutually exclusive, that is, they cannot have a common ground. This paper observes that African cultures perceive the environment as a religious and a human endeavour, an attitude that can be instrumental in conserving the environment. This paper shall use secondary data as its main sources of information. The data shall be analysed using philosophical methods.
The introduction of third generation (3G) technology has been the driver behind customers’ demand for more and more data while extracting high quality services. Therefore, operators make use of femtocells to enhance indoor coverage and network capacity. However, a successful deployment of this type of network has been a challenge due to user mobility dynamics. In this piece of work, we study femtocell network with special attention to impact of user mobility dynamics on resource allocation. Specifically, we incorporate users’ mobility dynamics in terms of connections, considering the variation in time of their position. Mobility-aware Femtocell Cluster-based Resource Allocation (M-FCRA) algorithm is proposed. It is a hybrid of centralized/distributed algorithm involving three main phases: cluster formation, cluster-head resource allocation with user mobility awareness, and resource contention resolution. M-FCRA formulates the frequency/time resources allocation mathematically as a Min-Max optimization problem. The results validated by performing comparison of its simulations with FCRA algorithm in terms of the quality of service, spectrum spatial reuse (SSR).

Keywords: Femtocell, OFDMA, User mobility, Resource allocation, Clustering, Quality of service

S2013-08 Efficacy of three plant extracts in reducing sediment and heterotrophic bacterial load in surface raw water in samburu District, Kenya

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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 object of water treatment is to provide potable water. To attain this, cheap, effective and sustainable water treatment technology using natural plant products needs to be developed. This study was undertaken in order to assess the efficacy of plant extracts in purifying water 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 x 10³ - 2.0 x 10⁷ ), (mean 2.75 x 10⁶). 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. However some unidentified residual bacteria that resisted the disinfection properties of plant extracts. 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 %. It was also noted that, plant extracts changed the water pH. This study therefore concludes that water from most sources is contaminated and must thus be treated before consumption. Also the three plant extracts should be considered as potentially useful chelants, and should be subjected to further study.

Key Words: Efficacy, Plant extracts, Turbidity, Heterotrophic bacteria, Water
S2013-09 Bacterial Risk and Contamination Level of Raw Drinking Water from Ground and Surface Water Sources in Wamba Division, Samburu District.

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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 watersources (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 information on the bacterial load in water from different sources can now 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. This study therefore concludes that, water from most sources in Wamba Division, Samburu District is contaminated and must thus be treated before consumption.

Key Words: Bacteriological, Water, Sources, Contamination

S2013-10 Maintenance optimization Models for Steam Turbines: A case study at Olkaria I Geothermal Power Plant

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Due to intense global competition and increasing demands from stakeholders, companies are striving to improve and optimize their productivity to stay competitive. The performance and competitiveness of most manufacturing companies is dependent on the energy sector. As energy becomes the current catchphrase in business, industry, and society, it continually faces a series of problems and challenges. One of the challenges experienced in the maintenance department is striking a balance among availability, cost of maintenance, frequency of inspection and repairing-replacement decisions. Occasionally, this problem has led to escalation of maintenance cost, increase in downtime and consequently, a reduction in the availability of the power plants. The effect of such consequences is a reduction in the productivity and profitability of the given power producing company. On the larger scope, this can lead to slowing down our journey to Vision 2030 as a country because all the other three pillars and flagship projects depend on energy. This research presents a unique approach to maintenance optimization of steam turbines used in geothermal wells. The necessity to optimize maintenance follows from a need to minimize on the maintenance and operation costs (O & M costs), maximize the overall availability of the steam turbines and minimize the downtime. This objective was met by coming up with age-based mathematical models which minimizes the costs, maximizes the availability and optimizes on the frequency of inspection of the steam turbines.

Keywords: Maintenance, Vision 2030, Productivity, Availability, Age-based
S2013-11 Factors Influencing the Intention to Use Location-Based Mobile Advertising among Micro-Enterprises

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The use of location-based mobile advertising to deliver context specific information from businesses to clients has the potential to help them increase revenues, personalize offerings and reduce marketing costs. However, there is a lack of adoption of this emergent mode of advertising among micro-enterprises. This study examined the underlying reasons for this lack of adoption using an exploratory factor analytic study based on an adaptation of the Technology Acceptance Model with the choice of technology as an additional factor. Data was collected in a survey involving 304 micro-enterprises by means of structured questionnaires and interview schedules. A majority of micro-enterprises sampled in the study were not aware of location-based mobile advertising. The study findings validate the technology acceptance model and also reveal that the choice of technology is an important factor influencing the intention to use location-based mobile advertising by micro-enterprises.

Keywords: Micro-enterprises, Location-based Mobile Advertising (LBMA), Technology Acceptance Model (TAM)

S2013-13 Evaluation of Mobile Social Software for Sustainable Development

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Social Computing aims to support the tendency of humans to interact with mobile devices. Technology reinforces the bias toward social interaction by producing appropriate responses, it has improved the communication between humans and computational devices. Developments in mobile phone technologies have opened the way for a new generation of mobile social applications that allow users to interact and share information, however, current programming platforms for mobile phones provide limited support for information management and sharing, requiring developers to deal with low-level issues of data persistence, data exchange and vicinity sensing. This paper evaluates the importance of social networks for sustainable development and performing everyday tasks in the developing world leads to new considerations of the utility of social networking. My motivation towards the phenomenon of mobile social software has grown into a state of research through observing tremendous use of social software applications over the past years, they have changed the way people communicate online and share media, very little academic research has been done on the mobile social software. The proposed paper focuses on mobile social software, investigation will be done to identify the opportunities and challenges impeding users’ acceptance of mobile social software, In order to obtain relevant empirical data survey will be obtained from users both older and younger adults and identify the challenges faced by each group.

Key Words: Mobile Social Software, Technology, Networking.

S2013-14 Fraud Vulnerability of Kenya’s National Identity Card System

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Modern crimes such as terrorism, money laundering and illegal immigration are majorly committed by individuals who falsify their identities by forging identification documents. One such document that is a target
of forgery in Kenya is the national identity card. Research has shown that thousands of national identity cards in use today are not genuine. An understanding of the challenges that make identity card systems vulnerable to fraud may help in developing specifications for secure identification systems. This study investigates design and functional weaknesses inherent in Kenya’s national identity card system and proposes potential areas for further research. A survey was carried out on Kenya’s second generation identity card system which is currently run by the department of National Registration Bureau. System administrators and users of Civil Identification System, Automatic Fingerprint Identification System and Production System were interviewed. In addition, all processes undertaken at the field registration stations were observed and relevant documentation studied. The study found out that the national identity card system is challenged mainly by existing manual processes, outdated technology and its architectural design. It is hoped that the findings of this study will assist relevant experts in developing effective national identity card systems.

Keywords: National Identity Card, Civil Status Data, Biometric, Identity Fraud

S2013-15 Web Based Data Extraction For Information Retrieval

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With Web 2.0 the amount of useful semi-structured data on the web continues to grow at a stunning pace. Interestingly, the web data is not in database systems but in HTML pages, XML pages, or text files. Web data extraction is deemed to be one of the growing technologies in web mining. Rife information content available on the World Wide Web is published within representation-oriented semi-structured HTML pages making it difficult for machines to access the content. Data extraction from the WWW (Internet) is performed using information retrieval tools according to the parameters given and stored in a local database or files. Information Retrieval calls for accurate web page data extraction and order to enhance retrieval precision, irrelevant data such as navigational bar and advertisement should be identified and removed prior to indexing. Effective utilization of web based information retrieval tools to be enhanced in the user community. Monitoring of various web based products will be done easily with the full utilization of the technology. It becomes a great tool for data analysis and intelligence in the new age.


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Traffic congestion in many areas particularly poorly designed truckers parking bays presents a unique public health threat due to toxicity of its emission, accidents, oil spills and social evils as other studies have shown. Salgaa known as “wild west” situated 20 km from Nakuru city on Nakuru – Eldoret highway in Kenya, began as a small market centre twenty years ago. Since then, it has grown to a middle size urban due to its famous night stop over for truckers moving from Mombasa to other parts of East African countries. The government put a ban on movement of trailers at night due to accidents they cause along the highway. Salgaa not only offered favourable spot to hosts truckers but also attracted sex trade. Despise the economic benefits from sex trade; both truckers and the sex trade business have resulted to negative environmental impacts which are critical and needed to be addressed. The government and NGOs efforts to address the negative impacts have yielded little because of the non integrated holistic approach employed. Drawing on government and
NGO reports, as well as other documentary sources, this research study examined the integrated holistic approach to truckers’ parking bay and sex trade on environmental health, safety and socio economic status. Data was collected from 60 respondents drawn from 30 commercial sex workers, 20 truckers and 10 residents of Salgaa using questionnaires, focus group, selected by simple randomization. Reliability and validity of the instrument was tested through Cronbach test. The data was analysed by means of SPSS tool using descriptive statistics and hypotheses tested using regressions, ANOVA, and Lickert scale at 0.05 alpha for testing level of significance. The study found that the truckers parking bay primarily contributed significantly to the sex trade and secondarily resulted to 12 cases of fire accidents from oil spills in a year, 5% rate of HIV/ Aids infection per year, high level of drugs and alcohol abuses, 3-5 road accidents per week, 15% school dropouts in a year. The prevention and control management of environmental and socio economic hazards using integrated conventional and faith value approach by NGOs and government agents were lacking hence increasing the magnitude of the hazards. The findings will be used to formulate policy for environmental hazard management and provision of education to the public.

**Key words:** Truckers parking bay, environmental health hazards, oil spills, fire accidents, HIV/ Aids spread, illicit drugs/ alcohol abuse, school dropouts.

### S2013-17 Abinitio Calculations of the Electronic and Mechanical Properties of Orthorhombic Phase of BaF2

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Electronic and mechanical properties of orthorhombic phase of BaF2 have been calculated using *ab-initio* methods. We have applied density-functional theory within generalized gradient approximation (GGA) using plane-wave pseudopotentials method and a plane-wave basis set. Our calculated lattice parameter *a* is 6.69 Angstroms comparable to experimental value of 6.16 Angstroms while the ratio of *b* = *a* in this work is 1.16 Angstroms and experimental value is 1.28 Angstroms. Band gap is here calculated at 9 eV which is in good agreement with the experimental value. The bulk modulus derived from the elastic constant calculations of orthorhombic phase of BaF2 is 94.5 GPa while bulk modulus from the Murnaghan methods is 108.8 GPa. The stability values in crystallographic directions are given as A1 is 1.13, A2 is 0.54 and A3 is 0.86 showing that this phase is metastable.

**Key words:** Bulk modulus, Elastic constants, Band gap

### S2013-18 Benchmarking of Undergraduate Computing Curricula in Kenya

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This paper investigates the quality of undergraduate computing curricula at Kenyan universities, how they compare locally and regionally with equivalent programs and how closely they meet the ICT sector needs. It is guided by four objectives i.e. to undertake an ontological mapping of computing curricula, to identify appropriate benchmarking criteria, to develop and test a benchmarking tool, and to investigate the alignment of these curricula to computing skills requirement. The study was deemed important by the plethora of academic...
computing programs of varying degrees of utility and credibility, which are a product of the escalating demand for computing education in Kenya given the development of Vision 2030 and the rapid growth of the ICT industry. To achieve its objectives, the study adopted a quantitative and qualitative cross-sectional descriptive survey of computing curricula offered locally (in Kenya) and regionally (from best practicing countries, USA and India). A sample of 70.3% was drawn from the target population for ontological mapping. Two research instruments, i.e. a questionnaire and a document analysis framework that were administered to a cross-section of 11 public/private universities. The study established that there are 24 undergraduate computing programs under 6 titles, viz. BSc., BCom., BTech., BB., BEd. and BEng. The two most populous programs are BSc. Computer Science (CS) and BSc. Information Technology (IT), which were selected to help identify two benchmarking criteria: Percent weight allocation of core hours within ACM knowledge areas and Relative performance capabilities of computing graduates. Using these criteria a benchmarking tool was developed and tested, which depicted disparities among the respondents in the percent weight allocation of core hours in CS programs. Similarly, it portrayed overlaps in the relative performance capabilities of CS and IT graduates, an outcome that queried the uniqueness of these programs. As such, its results indicate that the quality of the two computing programs is relatively insufficient. However, it further establishes that the computing curricula are aligned to meet the top 3 highly demanded computing skills i.e. Networking, Software development and Internet skills albeit insufficient percent weight allocation of core hours in Software development. It therefore recommends further testing and refining of the established benchmarking tool, the need to re-focus the computing programs and supports the call to institute a regulatory body and qualifications framework for computing education and skills.

S2013-19 Diatom Ecological Indicator Values in the Assessment of Water Quality in Three Rivers of Lake Victoria Catchments

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Epilithic diatoms in rivers Kibos, Nyando and Kisat draining into Lake Victoria were studied on seven occasions over a period of four years with the aim of estimating the water quality from known diatom ecological indicator values: Saprobity, Oxygen requirements, Trophic state, Nitrogen uptake metabolism, Moisture, pH and Salinity. The diatoms were collected from 12 sampling sites (4 on each river), processed by acid digestion and enumerated under oil immersion on a light microscope. Quantitative frustule counts were made in order to investigate spatial and temporal variations in diatom assemblages. 19 environmental variables were measured to determine stream condition. The diatom ecological indicator value for each site was obtained from scores of weighted averages of diatom assemblages with known ecological indicator values. Correlation was performed to establish relationships between distribution of diatoms and environmental variables. 224 diatom taxa belonging to 32 genera were identified. 83.5% of the taxa had at least one of the known ecological indicator values and occurred consistently in high abundance on spatial and temporal scales. The indicator values were significantly correlated with the corresponding environmental variables. Saprobity was strongly correlated with biological oxygen demand, hardness, alkalinity, conductivity and ammonia-nitrogen (p<0.001); Oxygen requirements with hardness, alkalinity and conductivity (p<0.001); Trophic state with hardness and conductivity (p<0.001); and Nitrogen uptake metabolism with temperature, biological oxygen demand, hardness, conductivity and ammonium-nitrogen (p<0.001). The indicator values satisfactorily predicted the ecological water quality and showed that Kibos was the least
polluted followed by Nyando while Kisat was the most polluted. Pollutants generally increased downstream in each river. The results reveal the suitability of using diatoms for water quality estimation in the three rivers. The diatom ecological indicator values can complement routinely employed physical and chemical methods of assessing river water quality and pollution, and for monitoring aquatic environments in the region.

**Key words:** Diatoms, Biological indicators, Water quality, Pollution, River monitoring

**S2013-20 Effect of Blue Background Light on Haematology and Plasma Biochemistry of Three Strains of Nile Tilapia (Oreochromis Niloticus Linnaeus) Fingerlings Exposed to Acute Stress**

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The present study aimed to evaluate the effects of blue background light on haematology and blood chemistry in Nile Tilapia (*Oreochromis niloticus*) fingerlings of three different origins exposed to acute stress. Fingerlings from Sagana Aquaculture Centre, Lake Turkana and Lake Victoria were transferred to 24 20 litre glass aquaria divided into two groups (4 replicates each). Blue background light was imposed on one group while the second group was left under natural light. Fingerlings in two of the aquaria for each group were exposed to acute stress by netting for 1 hour after 10 days. Blood samples were taken before and after the application of acute stress into two separate bottles one with the anticoagulant EDTA and the other without. The haematocrit, hemoglobin (HB), erythrocyte count and leucocyte count were evaluated from the blood samples with EDTA while the total plasma protein, albumin and globulin were determined from the blood collected without EDTA. The results indicate reduced values for all blood parameters except leucocytes after acute stress has been imposed in fingerlings under natural light and an increase for fingerlings exposed to blue light. The changes in blood parameters were more significant (p<0.05) for fingerlings of Sagana and Lake Turkana origin compared to those of Lake Victoria origin. It can be deduced that blue light reduces the stress response in all the fingerlings and that the fingerlings from Lake Victoria are less susceptible to physical stress.

**Key Words:** *Oreochromis niloticus*, Haematology, Plasma Biochemistry, Stress

**S2013-21 Performance Analysis on Typical Homemade Biomass Powered Cereal Drier**

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Recent studies have revealed that drying maize using biomass driers increase the quality of grains, delays insect infestation, mould and aflatoxin contamination compared to drying using direct sunlight. Most importantly, biomass drying takes shorter time. It is therefore important to undertake thermal characterization of these driers in order to investigate the possibility of empirical control of such systems in remote areas. In this paper, we present results of thermal characterization of biomass-powered cereal drier (batch drier). The results show that under natural convection, temperature behavior within the drying chamber is unpredictable. However, the use of exhaust fan (forced convection) gives predictable temperature behavior within the drying chamber. For burner shutter open at 50% and using maize cob as the fuel for forced convection, the drying chamber attained a maximum temperature of 93°C after 28 minutes and minimum temperature of 69°C after 37 minutes in the lower tray (tray 1). For burner shutter open at 100%, the drying chamber attained a maximum
temperature of 91°C after 41 minutes and minimum temperature of 67°C in tray 1. With burner 50% open, tray 2 attained a maximum temperature of 62°C after 30 minutes and minimum temperature of 56°C after 40 minutes. With the burner 100% open, tray 2 attained a maximum temperature of 61°C after 39 minutes and minimum temperature of 52°C after 52 minutes. From these results, the optimal operating conditions of the burner operation were achieved when the shutter was open at 50%. It took 76 minutes to dry 5kg of maize with about 0.8kg (including dampness from rains) moisture content in tray 1. It took 140 minutes to dry the same quantity and moisture content of maize in tray 2. These results show that it is possible to control empirically biomass cereal (maize) driers.

**Keywords:** Drying, Temperature, Maize, Empirical, control

### S2013-23 Impacts of Climate Change on Natural Resources and Gender: Adaptation Strategies among the Samburu Pastoralist Communities of Northern Kenya.

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Climate change has become a global environmental issue dominating national and international debates. IPCC has affirmed the warming of the earth and consequent destructive impacts which will be differently felt and distributed among different regions, generations, age classes, income groups, occupations and genders. Pastoralists are likely to be adversely affected by these impacts because of predisposing ecologic, economic and socio-cultural factors. For millennia, Samburu pastoralists have been coping with climate variability but now need an adaptation strategy. Due to sole dependency on natural capital for livelihoods, building resilience against climate change impacts has become like winning a lottery among the Samburu community. Climate hazards such as drought and floods in the region are more frequent and severe affecting livelihoods. We investigated impacts of droughts and floods on natural resources, gender use and access to these resources, and gender specific adaptation strategies among the Samburu. The study was carried out in Samburu East, northern Kenya in a survey that involved 180 respondents who were randomly selected but stratified according to age and gender from five community ranches. Focus Group Discussions, key informants, interviews, life histories, specified transect walks and digital photography were used to clarify and triangulate the questionnaire study. Water livestock and pasture were considered very important for livelihoods. The most observed climate change indicators included prolonged droughts (93.9%), loss of pasture (98.8%), increase in livestock diseases (81.1%), and drying of water sources (78.9%). The study revealed that the female use natural resources more than the male due to gender roles and thus faced more impacts than their male counterparts. Despite their vulnerability, females were also found to be more innovative and had diversified adaptation strategies than males. The study concluded of the need for a gender consideration in climate change discourse especially in policies and legal frameworks.

**Key words:** Climate change, Natural resources, Gender and Adaptation

### S2013-24 Characterization of Seasonal Rainfall Variability and Drought Probability of the Semi-Arid Areas of Mbeere Region in Embu County, Kenya

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Drier parts of Embu County endure high atmospheric heat, prolonged dry spells, declining soil fertility and erratic
rainfall patterns with large and growing population segments occasioning continued declines in agricultural productivity. Farmers’ limited understanding of spatio-temporal rainfall distribution, plant-water-nutrient interactions, poor water and soil conservation techniques continue to impede optimal agricultural productivity. Hitherto, the much-needed information on inter/intra seasonal variability of rainfall is still inadequate despite its critical implication on soil-water distribution, WUE, Nutrient Use efficiency (NUE) and crop yield. This study sought to quantify and characterise inter/intra seasonal rainfall variability as the first step towards combating the effects of unpredictable rainfall patterns, prolonged dry spells and droughts in Mbeere District of Embu. To quantify seasonal rainfall variability, long-term daily rainfall data was subjected to preliminary homogeneity testing and frequency analyses based on normal distribution functions and transformation. Homogeneous seasonal rainfall amounts and number of rainy days was then subjected to variability quantification for both Long Rain (LR) during March-April-May (MAM) and Short Rain (SR) during October-November-December (OND) growing seasons. Long term rainfall trends and deviations from the average were evaluated using Cumulative Departure Index (CDI) based on normalized means of both seasonal and annual rainfall amounts within the period of record. Rainfall Anomaly Index (RAI) was then used to evaluate seasonal variability based on both negative and positive anomalies in seasonal and annual average rainfall. From the results, the rescaled cumulative deviations (RCD) had zero outliers for both seasons in the two stations restricting the homogeneity around the zero mark of RCD. The Number of NIL-values (below threshold) were zero while Non-Nil Values (above threshold were 100%. A plot of homogeneity showed deviations from the zero mark of the RCD not crossing probability lines (thus homogeneity was accepted at 90%, 95% and 99% probabilities). There was at least 90% chance of receiving rainfall greater than 213.5 mm in MAM and rainfall amounts exceeding 258.1 mm during long rain seasons (OND) at both Machang’a and Embu respectively. Variability in seasonal rainfall showed that, in spite of the near homogeneity in the mean onset and cessation dates, the former was highly variable on an inter-annual scale. The two rainfall seasons are innately dissimilar and therefore require specific cropping in agro-ecological zone (Low Midland 4 and 5) LM4 and LM4-5. It is possible that farmers in (Inner Lowland 5) IL5 have been missing an opportunity by under-utilizing MAM rainfall. In terms of drought projection and probability, it was evident that the distribution of daily rainfall was vastly skewed with high frequency of occurrence dry spell events. The distribution of daily rainfall depths was also highly skewed, a comparatively small proportion of rainy days supplying a high proportion of the rainfall. The results should be incorporated in implications of climate variability and vulnerability assessment in semi-arid areas of Embu County.

Key Words: Rainfall Anomaly Index, Cumulative Departure Index, seasonal rainfall variability

S2013-25 Nucleon-Nucleon Interaction in Infinite Nuclear Matter
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The thermodynamic properties of Rhenium (R) using Nuclear-Nuclear (NN - Interaction) via a scattering potential: in addition to the unperturbed Hamiltonian $H_0$ is studied. The second quantization approach was used to calculate the Hamiltonian of the system. The specific heat variation with temperature showed a second order phase transition at $T_c = 0.144 \text{ K}$. This could be a phase transition from normal to a superconducting state at low temperature below $T_c$. The variation of specific heat with Excitation energy exhibits a linear relationship but with increasing gradients at higher values of constant temperatures to a maximum gradient corresponding to the critical transition temperature $T_c$. This shows that the maximum specific heat at all excited states occurs at the critical transition temperature $T_c$ due to thermal excitation. This result confirms the presence of low
S2013-26 Ameliorating Melarsoprol Toxicity Using Kenyan Purple Tea Anthocyanins and Co-enzyme-Q10 in a Mouse Model

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Melarsoprol, an organic arsenical is the only drug used to treat late stage *T. b. rhodesiense* infection in spite of its toxic side effects. A mouse model was adapted to study the effects of melarsoprol which was apparently toxic at normal intravenous doses of 3.6mg/kg body weight. Results from this study show that melarsoprol prominently reduced aconitase-1 and glutathione levels in the brain of mice. Additionally, blood analyses showed that it decreased packed cell volume (PCV). However, orally administered Kenyan purple tea anthocyanins or coenzyme-Q$_{10}$ prevented to a significant degree melarsoprol-induced decrease in packed cell volume and restored aconitase-1 and glutathione levels. Notably, anthocyanin metabolites were detected in brain tissue of anthocyanin fed mice using high performance liquid chromatography. Co-administration of tea anthocyanins and coenzyme-Q$_{10}$ caused a reduction of these beneficial effects implying a negative interaction between the two antioxidants. The present study demonstrates a role of reactive oxygen species sensitive aconitase-1 and glutathione in the induction of reactive encephalopathy by melarsoprol. Evidence provided in this study implicates melarsoprol with interference of brain antioxidant systems and proposes that therapeutic intervention with purple tea anthocyanins or coenzyme-Q$_{10}$ may be useful in improving treatment outcome in late stage Human African Trypanosomiasis consequently reducing occurrence of post treatment reactive encephalopathy occurrence.

Key words: Melarsoprol, Encephalopathy, GSH, Aconitase, Anthocyanins, Coenzyme-Q$_{10}$

S2013-27 Kenyan Purple Tea Anthocyanins Ability Cross the Blood Brain Barrier Reinforcing Brain Antioxidant Capacity in Mice

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Studies on antioxidants as neuroprotective agents have been hampered by the impermeability of the blood brain barrier (BBB) to many compounds. However, previous studies have shown that a group of tea flavonoids, the catechins are brain permeable and neuroprotective. Despite this remarkable observation, there exists no data on the bioavailability and pharmacological benefits of tea anthocyanins (ACNs) in the brain tissue. This study investigated the ability of Kenyan purple tea ACNs to cross the BBB and boost the brain antioxidant capacity. Mice were orally administered with purified and characterized Kenyan purple tea ACNs or a combination of Kenyan purple tea ACN's and coenzyme-Q$_{10}$ at a dose of 200mg/kg body weight in an experiment that lasted for 15 days. Twenty four hours post the last dosage of antioxidants; CO$_2$ was used to
euthanize the mice after which the brain was excised used for various biochemical analyses. Brain extracts were analyzed by HPLC for ACNs metabolites and spectrophotometry for cellular glutathione (GSH). Kenyan purple tea anthocyanins significantly ($p<0.05$) raised brain GSH levels implying boost in brain antioxidant capacity. However, co-administration of both antioxidants caused a reduction of these beneficial effects implying a negative interaction. Notably, ACN metabolites were detected in brain tissue of ACN fed mice. Our results constitute the first demonstration that Kenyan purple tea ACNs can cross the BBB reinforcing the brain’s antioxidant capacity. Hence the need to study them as suitable candidates for dietary supplements that could support antioxidant capacity in the brain and have potential to provide neuroprotection in neurodegenerative conditions.

**Keywords:** Anthocyanins; Blood brain barrier; Coenzyme-Q$_{10}$; Glutathione; Kenyan purple tea

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**S2013-28 Productive Strategies of Making a Living out of Waste Plastic Bags: A Case of Kisii Town**

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This is to study and examine various productive strategies being used by residents of Kisii Town to make a living out of waste plastic bags which is an environmental pollution in the Town. The study targeted both men and women, working and jobless who are over 18 years of age residing in Kisii Town which is the headquarter of Kisii County in the Western region of the Republic of Kenya. Both qualitative and quantitative data were collected using interview schedules consisting of fixed and open-ended questions administered in face to face interviews. Stratified random sampling method was used to select the samples for the study, that is, 200 residents were interviewed (literate and illiterate, working and jobless, rich and poor). The quantitative data were analyzed using the statistical package for social sciences (spss) computer package while the qualitative data were analyzed manually. The study showed that a number of productive approaches were well being used to make a living out of waste plastic bags, the major one being; youth groups making beautiful bags from waste plastic papers which include laptop bags, ladies hand bags, school bags and the other one being making of table mats and carpets which they sell in Kisii town. These economic activities create employment opportunities and also reduces environmental pollution. The other findings was that most of the productive approaches being used were generally effective and help in environmental conservation. Nevertheless, there are a number of shortcomings faced in using these productive strategies and the key ones include, lack of quality machines to extract waste plastic bags from the dumpsites; inadequate resources to expand the business and also ignorance of environmental pollution among Kisii residents. However, from the findings of study, there were viable ways through which the challenges could be addressed. The key ones included Kisii County government to allocate funds for extraction of waste plastic bags using best practices and the financial institutions to offer affordable loans to business people dealing with recycling of waste plastic bags so to control environmental pollution. This study concluded that there were ways the Kisii residents were using to make a living out of waste plastic bags and this preventive strategies were generally effective. However, effectiveness of this approach can be hampered by other constraints.

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**S2013-29 Impact of Auxiliary Service Voltage Transformer on Power Networks**

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The application of an auxiliary service voltage transformer (ASVT) as a conventional distribution transformer is an effective and economical way of distributing electricity to rural communities in close
proximity to high voltage transmission lines. This un-conventional system involves simple station 
engineering and represents a viable alternative for electrification of rural communities with load 
requirements of up to 1MVA. The supply can be availed at three phase arrangement supplying enough 
energy for refrigeration services, water pumping, illumination, and other low voltage requirement. 
This paper presents an innovative design of an ASVT based on instrument transformer principles. The 
system is designed with regard to high thermal power requirements of ASVTs, insulation considerations, and 
harmonics mitigation strategies. The results show that the level of harmonic current, insulation properties 
and their impact on the power networks may be suppressed as long as the ASVT design parameters are 
harmonized to the line reactance of the power network. In this design, the following parameters have been 
determined; primary and secondary turns, number of coils per phase, number of turns per coil, conductor 
cross-sectional area, area of each strip, disposition of each strip, core diameter, core area, core stack, weight 
of the core, winding material, type of the coil, and the connection method used.

**S2013-30 Volatility Estimation of Stock Prices Using Garch Method**

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Economic decisions are modeled based on perceived distribution of the random variables in the future, 
assessment and measurement of the variance which has a significant impact on the future profit or losses of 
particular portfolio. The ability to accurately measure and predict the stock market volatility has a wide spread 
implications. Volatility plays a very significant role in many financial decisions. The main purpose of this study 
is to examine the nature and the characteristics of stock market volatility of Kenyan stock markets and its 
stylized facts using GARCH models. Symmetric volatility model namely GARCH model was used to estimate 
volatility of stock returns. GARCH (1, 1) explains volatility of Kenyan stock markets and its stylized facts 
including volatility clustering, fat tails and mean reverting more satisfactorily. The results indicate the evidence 
of time varying stock return volatility over the sampled period of time. In conclusion it follows that in a financial 
crisis; the negative returns shocks have higher volatility than positive returns shocks.

**Key Words:** GARCH, Stylized facts, Volatility clustering

**S2013-33 Evaluation Of Termiticidal Properties Of Chemically Modified Cashew Nut Shell Liquid**

Edgar Obege Eliveha, Patrick M. Mwangi and George T. Thiong’o

Cashew nut shell liquid (CNSL) is a by-product of cashew nut processing that contains phenolic compounds 
such as anacardic acid, cardanol, cardol and 2 – methyl cardol. Cardanol and cardol were isolated chemically 
from CNSL by chemical method. The paper aimed at incorporating copper and chlorine in CNSL, decarboxylated 
CNSL, cardanol and cardol as wood preservatives and comparing their efficacy against termites with the 
commercially available termiticide (Gladiator). The work was carried out and keen observations made on 
feeding habits of termites on wood samples of Juniperus procera (cypress), Grevilea robusta, and Pinus 
insularis (pine tree) of dimensions 10 × 4 × 3 cm each. The test samples were coated with wood preservatives 
formulated using wood brush and another batch coated with Gladiator with control being untreated wood 
blocks, dried at room temperature and introduced at ant hills having a nest of Microcerotermes beesoni for 
30 days. Percentage weight loss were calculated for each block after termite exposure and the jackknife 
test carried out to determine the extent of destruction due to termite attack. Percentage of deterioration was 
calculated with reference to the control samples using student t-test and ANOVA at 95% confidence level.

**Key Words**: CNSL, Preservatives and Wood blocks.
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We purpose at all times in all places, “to set apart in our hearts, Jesus Christ as our Lord” (1 Peter 3:15)