

Kabarak University 4th Annual International Conference

15th - 18th July 2014

Theme: *Addressing the Challenges Facing Humanity through Research and Innovation*

Venue: Kabarak University Main Campus

Programme

DAY 1 – 15th July 2014

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

Venue: KLaw

Facilitator: Ms. Margaret Ningala

Activity
Registration

STUDENT EXHIBITIONS

Venue: KLaw 5

Date: 15th July 2014

Time: 9 am -12.00 pm

Facilitator: Dr. Maghanga, Geofrey Kamau, Dr. chemwe, Dr. Kebenei

Ex2014-01 Torque Controller (Torqco) for Alternating Current Induction Motors; Dennis Kibet Maritim, Technical University of Mombasa

Ex2014-02 Advanced Water Pump that uses Road Bumps to Pump Water
Wekesa Sindani Felix, Masinde Muliro University of Science and Technology

Ex2014-03 SmartCERT: A Radio Frequency Identification (RFID) based solution Amugada
Stephen Ambani, Masinde Muliro University

Ex2014-04 Privatization of corrections: A case study of Kenya prisons.
Alex Kimani Waweru
Kabarak University,.

Ex2014-05 Monde System of Governance
Adinda L and Yefta P.
Mount Kenya University,

Ex2014-06 School Management System (geinan student manager)
Barasa Mamati Godliphas
Kabarak University,

Ex2014-07 Domestic Hydro-Electrical Generation
Chesang Ted Kipkemei
Moi University, Department

Ex2014-08 Prosecution should be an Independent Body in Kenya by 2030
Edward Sospeter Onyango
Kisii University,

Ex2014-09 Lack of Service Quality in Customer Satisfaction as a Catalyst of Innovation
Geoffrey Kiprono Biwott
Moi University, Department of Management Science

Ex2014-10 Macro-Algal Dyes as Potential Industrial and Medicinal Products (Patent No.: KE/P/2013/001918)
Njiru Christine Wakuthii
Technical University of Mombasa

Ex2014-11 Solid Waste Management - CLIENVIRON CARE
Cliffords Maende
University: Maasai Mara, Dept: Agricultural Economics, P.O. Box 861-20500, Narok.

Ex2014-12 Integrated health card system in Bondo
Wanjohi Rose Wambui¹ and Njoroge Einstein Nyarwegah²
University: Jaramogi oginga odinga university of science and technology, Department: Informatics and Innovative Systematics.

Ex2014-13 Crates Navigator

Eric G. Maina,
University: JKUAT, Department Of ICSIT,JKUAT Nakuru Campus,

Ex2014-14 Re-usable rehab bags

Susan Wambui Rujema
Jomo Kenyatta University of Agriculture and Technology (Nakuru CBD Campus), Department of
Entrepreneurship and Procurement

Ex2014-15 Online Academic Notes (camponotes.org): Addressing the challenges facing access of informative course notes in campuses**Maurice Shilabula**

Moi University Main Campus, Department of Information Science

Ex2014-16 OutLetPOS Abstract

Emmanuel Achachi Nyachoke
Kabarak University, Department of Mathematics & Computing Sciences

Plenary Session

Venue: KLaw 5
Chair: Prof. Kefa Rabah
Rapporteur: Dr. Stella Muhanji
Prayer: Rev. Justus Mutuku

Time	Activity
12.00 a.m. -1.00 p.m	Invited Speaker: Mr Thomas Adedayo-Topic: Promoting Student Innovation
1 pm – 2.00 pm	Exhibition / Lunch Break

DAY 2 – 16th July 2014

Time: 8.00 a.m. - 9.00 a.m.
Venue: KLaw
Facilitator: Ms. Margaret Ningala

Activity
Registration

PRESENTATIONS BASED ON SYMPOSIA

MAIN CONFERENCE PROGRAMME

Symposium E2014-A

Venue: KLAW 4

Date: 16th July 2014

Time: 9am-11am

Chair: Dr. Chemwei

Rapporteur: Mr. Dave Bowen

Author(s)	Title
Awino N. Cellyne, Bichang'a W. Nyaigoti; Garissa University College,	E2014-02 A Cognitive Linguistic Analysis of Sexual Dysphemisms and Euphemisms in South Nyanza Dholuo.
Simon Nderitu, Mount Kenya University.	E2014-03 A Survey of Challenges to Contextualization of Selected Dimensions of Religiosity on Unity of Christian Church in Primary and Secondary School Communities in Nyandarua County, Kenya
Gidudu Hannah Lunyolo (<i>Uganda Christian University. Uganda</i>), O. Ayodo & Betty Tikoko (<i>Kabarak University</i>)	E2014-04 The Effect of Teacher -Student Ratio on Academic Performance in Universal Secondary Schools Uganda
George Ogochi, <i>Mount Kenya University.</i>	E2014-05 The Level of Job Satisfaction of Secondary School Teachers in Transmara West District , Kenya
Rose M. Moindi & Paul Odima (<i>Kisii University.</i>), Chadwick A. Digo (<i>Egerton University.</i>)	E2014-06 Degree Students' Access to Academic Resources: a case study of Kisii and Laikipia Universities in Kenya
Simon Nderitu , <i>Mount Kenya University.</i>	E2014-08 An Investigation Implementation of 'Best Practices' Strategies in Educational Supervision on Effective Teaching on Effective Teaching as a Supervisor in Nyandarua County, Kenya
Mutua Hannington Mutuku, Simion K. Ruto & Dogo Sheikh; <i>Mount Kenya University.</i>	E2014-09 An Investigation of the Effects of Postmodern Religious worldview on Faith and Practice among selected Religious groups in Nairobi

Symposium E2014-B

Venue: KLAW 5

Date: 16th July 2014

Time: 9am-11am

Chair: L. Chidongo

Rapporteur: Ms. E. Njenga

Author(s)	Title
Moses Gatambuki Gathigia (Karatina University) & Martin C. Njoroge (Kenyatta University)	E2014-57 The Study of English Animal Idioms: The Nexus between Theory and Applications
Onyango Daniel Oduor, Kamagambo Adventist College	E2014-58 The Impact of Curriculum Content and Community Support on Primary Schools' Academic Achievement in Central Nyanza Region, Kenya
Jaluo Murunga W., Maasai Mara University	E2014-16 Devolving Early Childhood Development Education in Kenya: Policy Challenges and Opportunities
Nyambeki Matoke Sylvia, Technical University of Kenya	E2014-17 Digitizing Teaching Methodologies in Kenya's University Education: the views of a Practicing Educator
Mabel Odima, Daystar University	E2014-18 Disintegration in Value for the Child: The case of Parental Negligence in an Urban Setting.
Josiah Kinyua Murage, Karatina University, Kenya	E2014-27 Role of a Prophetic Church in the Context of Poverty in Africa
Amos Kimani, Laikipia University Naivasha Campus	E2014-63 Application Of Social Media In Secondary Education, A Focus On Nakuru Municipality, Nakuru County

Symposium S2014*Venue: K LAW 4*

Date: 16th July 2014

Time: 9am-11am

Chair: Mr. Nickson Karie

Rapporteur: Mr. John Chebor

Author(s)	Title
Gilbert M. Kamau, Samuel M. Kangethe &, Stanley I. Kamau (JKUAT), Nick Giesen (⁴ Delft University of Technology, Postbus 52600 AA Delft, The Netherlands)	S2014-02 A Low-Cost Microcontroller-Based Lightning Monitoring Device
Jackson J. Kitetu., Kabarak University	S2014-03 An Ecological Assessment of potential impacts of riverbed sand harvesting to riparian ecosystems in Kenya.
S. N. Manegene, P. L. Kibet & S. Musyoki, Jomo	S2014-04 Analysis of Received Signal Levels in

Kenyatta University of Agriculture and Technology (JKUAT),	the Use of Cell Zooming For Outage Compensation
Maingi N.W and Mwangi. J.; Mount Kenya University Nakuru, Campus	S2014-63 Addressing Food Security/ Sugar Shortage in Kenya With Stevia (<i>stevia rebaudiana</i>) for Social Economic Growth through Agribusiness
Abraha G.K., ,S. Musyoki, and S. Kimani (Jomo Kenyatta University of Agriculture and Technology (JKUAT), Nairobi, Kenya)	S2014-05 Analysis of the effect of application traffic load variation on the Delay performance of MANETs
A. M. Kange, E. K. Cheruiyot & J. O. Ogendo (Egerton University) P. F. Arama (Rongo University College)	S2014-07 Baseline Survey on Pre- and Post-Harvest Factors Affecting Sorghum Production (<i>Sorghum bicolor</i> (L.) Moench) in Smallholder Farming Communities in Kenya
Orenge S. R Muriithi C. M Nyakoe G. N . JKUAT	S2014-17 Enhancement of Power System Transient Stability with Different Wind Generation Technologies using AVR and PSS
Njoroge Njeri Nancyrose & Michael W. Kimwele School of Computing and Information Technology, Jomo Kenyatta University of Agriculture and Technology,	S2014-69 Information Communication Technology for Community Development: Boosting Innovation through Mobile Technology

Symposium B2014

Venue: K LAW 4

Date: 16th July 2014

Time: 9am-11am

Chair: Dr. S. Muhajji

Rapporteur: Ms Claudia Limo

Author(s)	Title
Elijah Walubuka (Meru University of Science and Technology) Grace Ngung'u, (Kabianga University)	B2014-01 An Evaluation of Safety Training on the Frequency of Accidents in Manufacturing Firms in Kenya: A Case of Nakuru Municipality
Silas Okech Ongudi , Kisii University	B2014-02 Analysis of Determinants of the Variation in Fees and Expenses Charged BY Mutual Funds in Kenya
Dennis Opiyo Olila, University of Nairobi	B2014-03 Assessing the Key Drivers of Potential Gross Domestic Product: A Production Function Approach
Rev Julius Langat, & Eunice Njenga, Kabarak University	B2014-04 A Study of Marital Conflict Management among Couples in Ainamoi Division of Kericho County
Lydia Ayako Mareri, Egerton University	B2014-05 Can Transformational Leadership Work within University Settings? A case of

	Heads of Academic Departments in the Kenyan Public University Setting
Nickson Moseki Ongaki, Jomo Kenyatta University of Agriculture and Technology, Kisii, Kenya	B2014-06 Factors that Influence Labour Turnover of Private School Teachers in Kenya: A Case of Kisii County
Issa Toy Idris Dedan Kimathi University of Technology-Nyeri, Department Of Mathematics & Actuarial Science	B2014-31 Analysis of the risk factors that affect the youth and women enterprises fund

SYMPOSIUM L2014

Venue: KLAW 4

Date: 16th July 2014

Time: 9am-11am

Chair: Mr. Justus Otiso

Rapporteur: Mr. Charles Khamala

Author(s)	Title
Wycliffe Nyachoti Otiso, Kisii University	L2014-01 County Financial Governance and Public Participation
Shadrack Sharu Muyesu, Kabarak University	L2014-02 Governance under the New Constitutional Dispensation
Jackson Ndegwa , Kabarak University	L2014-03 The Devolution Debacle; The Battle for Supremacy
Chirchir Matthew Kimeli, Kenya School of Government, Embu	L2014-04 An analysis of citizens' participation in public administration in Kenya
F. Simiyu, Jomo Kenyatta University of Agriculture and Technology	L2014-05 Recasting the Quest for Devolved Governance of Agriculture in Kenya
Ms. F. Simiyu F. Simiyu, Jomo Kenyatta University of Agriculture and Technology	L2014-06 Rethinking the use of Bilateral Investment treaties as tools for sustainable development: The Kenyan Experience

11.00 – 11.30	Tea/Coffee Break + Exhibition	Precincts of the KLAW
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OPENING CEREMONY

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

Venue: KLAW 5

Chair: Dr. John Ochola

Rapporteur: Ms Janet Bunei

Time	Activity
11.30 a.m. - 11.35 a.m.	Opening Prayer, Rev. Prof. Jacob Kibor
11.35 a.m. - 11.45 a.m.	Entertainment, University Choir
11.45 a.m. - 11.50 a.m.	Welcome Remarks: Vice Chancellor Kabarak University - Rev. Prof. Jones Kaleli,
11.50 a.m. - 12.20 p.m.	Remarks from the Chancellor
12.20 p.m -1.00 p.m.	Invited Speaker: Dr Alfred Mutua- Governor Machakos County: Topic: Role of Research& Innovation in County Governance
GROUP PHOTO	

1.00 p.m -2.00 p.m.	Lunch Break+ Exhibition
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Symposium E2014-A

Venue: KLAW 4

Date: 16th July 2014

Time: 2pm-5pm

Chair: Prof. Awino.

Rapporteur: Rev. Kitur

Author(s)	Title
John Kimbio Mwalimo, Moi University Coast Campus	E2014-10 Challenges Facing Beginning Teachers in Induction
Margaret Njeri Ngugi & Jasper Edward Nyaura; Egerton University	E2014-11 Challenges Facing the Persons with Disability (PWD) in Accessing Information and Communication Technology (ICT): A Case of Cyber Cafes in Eldoret Town, Uasin Gishu County, Kenya
Jacinta M. Adhiambo & Obura, E. Atieno: The Catholic University of Eastern Africa	E2014-12 Chaplaincy for Transformative Leadership in Institutions of Higher Learning in the Light of Patristic Education: A Case Study of The Catholic University of Eastern Africa
Tom Mong'are Nyagwoka, Joseph K. Njino & Ezekiel Kasiera Musembe (Masinde Muliro University of Science and Technology) , Philemon Bureti, Mount Kenya University – Kakamega Campus	E2014-13 Mitigation Efforts of the Seventh Day Adventist Church Teachings to the Chebilat/Sotik Boarder 2007/8 Violence , Kenya
MilcahAjuo (Daystar University) & Raphael Ongunya (MasindeMuliro University of	E2014-14 Determinants of Information Communication Technology Adoption for

Science and Technology)	Teaching and Learning among Rural and Urban Early Childhood Development and Education Schools in Kisumu County
Edna Jemutai Moi (University of Nairobi) , Joyce Gikandi (Mount Kenya University) & Solomon Ng'etich (Moi University)	E2014-15 Determinants of Sustained Use of E-Services in Public Universities: A Case of University of Nairobi
Vundi Nason, St. Paul's University	E2014-19 The Role of the Church and Socioeconomic Development: Opportunities and challenges: Case of Africa Inland Church Kibera

Symposium E2014-B

Venue: KLAWS

Date: 16th July 2014

Time: 2pm-5pm

Chair: Prof. O. Ayodo

Rapporteur: Edna Koskei

Author(s)	Title
Daniel Kimemia and Winnie Ndeta, St. Pauls University	E2014-65 The Impact of Portrayal of the Family Image in Print Media on Kenya's Christian Marriages
Johnes M. Mwaruma, Voi Girls Education Centre, Voi.	E2014-36 Mapping out the level of integration of ICT in teaching of Science
Bernard Chemwei, & Sharon Jerotich Koech, Kabarak University	E2014-61 Hygiene Related Factors That Influence Teacher Turnover in Public Secondary Schools in Baringo District, Kenya
Abel Nyamesa Morara and Bernard Chemwei, Kabarak University	E2014-62 Factors Influencing Grade Repetition Among Rural Primary School Pupils In Nandi North District, Kenya
Joshua Odhiambo Ogal, Kabarak University;	E2014-45 Relationship Between Teachers' Job Satisfaction and Academic Performance in High and Low Performing Secondary Schools in Rachuonyo North District, Kenya.
John Rugutt, (Illinois State University, USA) & Caroline C. Chemosit (University of Kabianga)	E2014-49 A Multilevel Approach to Investigating the Achievement Gap of Students in Single-Sex Schools with Students in Coeducational Schools
Betty J. Tikoko (Kabarak University) & Evans Tallam (Mount Kenya University)& Jackline Keter (Mount Kenya University)	E2014-59 The Role of School Disciplinary Committee in Managing Student Discipline in Public Secondary Schools in Rongai District, Nakuru County, Kenya.

Symposium S2014 - A

Venue: KLAW 4

Date: 16th July 2014

Time: 2 pm-4.30 pm

Chair Prof. J. Kitetu

Rapporteur: Mr. Ayako

Author(s)	Title
Wellars Banzi, University of Rwanda	S2014-08 Decision Making in Agriculture, Fisheries and Forestry: Application of Operations Research
Ephantus Gichuki Mwangi & Wachira Kaburu; Jomo Kenyatta University of Agriculture and Technology, Nairobi Kenya	S2014-09 Design of a Computer-Based Optimized FLC Model Using FPGA Technology for Regulating Greenhouse Climate.
Anil Kumar, Nickson M. Karie, Kenneth Sigar & Andrew Kipkebut; Kabarak University,	S2014-10 Development of Basic Learning and Communication System for School Children with Speech Disabilities Using Mobile Platform
Henry B.O. Lung'ayia (Masinde Muliro University of Science and Technology) ¹ and Ludwig Triest (Vrije Universiteit Brussel, Belgium).	S2014-12 Diatom ecological indicator values in the assesment of water quality in three rivers of Lake Victoria catchments
Rop Naftali Kipkorir & Mbasu Zachariah, Maseno University	S2014-15 Effects of Computer Based Learning on Mathematics in Students' Achievement in Secondary Schools among the Physically Handicapped Learners in Kenya
Aloo, B. N.* and Yator, K. E.; University of Eldoret	S2014-16 Effects of <i>Moringa oleifera</i> Seeds on <i>Escherichia coli</i> , <i>Enterobacter aerogenes</i> , pH and Turbidity in Water from Selected Sources in Kitale Town
Megersa Tadesse Jirata, (Pan African University Institute of Basic Sciences, Technology and Innovation), Joel Cheruiyot Chelule & Romanus O. Odhiambo (JKUAT)	S2014-18 Estimation of Panel Data Regression Model with Individual Effects
Justus Muteti Kavoi, (KARI-Katamani Research Centre), John Gowland Mwangi (Egerton University) & Geoffrey Mbutia Kamau (Outreach and Partnerships, KARI Headquarters)	S2014-62 Challenges Facing Smallholder Farmers in Decision-Making in Innovative Agricultural Development in Semi-Arid Areas of Eastern Kenya
S. N. Manegene, P. L. Kibet and S. Musyoki,	S2014-45 Traffic Analysis In The Use Of Cell

Jomo Kenyatta University of Agriculture and Technology	Zooming For Outage Compensation
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Symposium S2014 - B

Venue: KLAW 4

Date: 16th July 2014

Time: 2 pm- 4.30 pm

Chair: Dr. Akenga

Rapporteur: Dr. W. Too

Author(s)	Title
Tina Vundi, St. Paul University, Kenya	S2014-01 The Contribution of Health Psychology to the Reduction of Health Cost in Kenyan Urban Areas
Lateef O.J, Kenyatta University	S2014-06 Challenges and Benefits of Practicing Exclusive Breastfeeding (EBF) in Africa
Koskei E.C. <i>Kabarak University,</i>	S2014-11 Diarrhoea Prevalence and Sanitation Facilities used in Bomet Municipality, Kenya.
A.Karanjah, F. Njui and G.P. Pokhariyal; University of Nairobi,	S2014-14 Effective strategy to manage herbal Drugs for Effective Treatment of Diabetes by use of the variance function of the Difference Between two estimated responses
Faith Ngundi Ndungi, Prisca Tuitoek and Abdillahi Aboud, Egerton University	S2014-41 The Prevalence of Overweight, Obesity, Diagnosed Diabetes Mellitus and Hypertension in The Swahili Community of Old Town and Kisauni Districts in Mombasa County
Benson Onyango, Chuka University,	S2014-48 Genetic diversity and symbiotic efficiency of root nodule bacteria associated with Bambara groundnuts (<i>Vigna subterranea</i> L. Verdc) in the drier parts of Lake Victoria basin.
Ochieng A. Carlyne, Kenyatta University.	S2014-40 The Impact of a Positive HIV Status of the Household Head on the Nutritional Status of a Household. Trends and Issues
Wesley Too, School of Health Sciences, Kabarak University	S2014-67 Experiences of support by and for HIV/AIDS partner: Serial-interview study on advanced AIDS patients

Venue: KLAW 4

Date: 16th July 2014

Time: 2 pm-4.30 pm

Chair: Dr. Irene Cherotich Asienga

Rapporteur: Ms. E. T. Chemaswet

Author(s)	Title
Vundi Nason, St. Paul's University,	B2014-08 Devolution versus Democratization in Kenya: A Case of Central Division, Machakos District, Machakos County Government
Lucyann M.Karani & Esther W. Nyoike (Egerton University) and Lydia C. Langat (Laikipia University)	B2014-09 Effects of Coordination on strategy implementation in manufacturing firms: The case of manufacturing firms in Nakuru.
Albert Odiwuor Apiyo, Benson Omor, Emily Murungi & Lawrence Njoroge; Jomo Kenyatta University of Agriculture and Technology	B2014-11 Human Capital Formation and Sustainability of Devolved County Governance: A Case of Kenyan Devolved Governance
Joyce K. Nyabuti , Kabarak University	B2014-12 Impact of Enhancing Human Resource Capabilities on the Competitiveness in the Kenyan Public Service
Benard Kodak (Maseno University), Omondi Oketch and Peter M. Matu (The Technical University of Kenya)	B2014-14 Innovation in the Language of <i>Coca Cola</i> Advertisement on Television

Venue: K LAW 4

Date: 16th July 2014

Time: 2 pm-4.30 pm

Chair: Mr. J. Otiso

Rapporteur: Mr.C. Masita

Author(s)	Title
Paul A. Opondo and John K. Boit, Moi University	L2014-07 The Challenges of Open and Distance Learning in Kenya: The Case of Public Universities
Gilbert Wafula Juma, Kisii University	L2014-08 The Youths Involvement In Governance Through Public Participation Under The New Constitution In Kenya
Sarah C. Langat Ngetich, Jomo kenyatta University of Agriculture and Technology.	L2014-09 Civic Education and Participatory Leadership: A Case Study of Selected Constituencies in Three Counties in Kenya.
Sarah C. Langat Ngetich, Jomo kenyatta University of Agriculture and Technology.	L2014-10 The Influence of Culture on Leadership in 21 st Century Society: A Case of Kenya's Political Leadership

5.00 pm - Tea/Coffee/Snacks

DAY 3 – 17th July 2014

Time: 8.00 a.m. – 8.30 a.m.

Venue: KLaw

Facilitator: Ms. Margaret Ningala

Activity
Registration

Symposium E2014-A

Venue: KLaw 5

Date: 17th July 2014

Time: 8.30am-11.00 am

Chair: Dr. Kiptiony

Rapporteur: Mr. Walter Chemjor

Author(s)	Title
Antony K Sang & Kennedy Bota (MMUST), Mayundo S Juma (Teachers' Service Commision)	E2014-20 Effects Of Proliferation of Public Secondary Schools on Quality Education in Teso North District
Josiah Kinyua Murage, Karatina University, Kenya.	E2014-21 Encounter between the AGĪKŪYŪ and Christian Eschatological hope in the Context of HIV and Aids in Kenya
Philip Kiprotich Chebunet (University of Eldoret) & Joyce Cheron Laboso Abonyo (Egerton University)	E2014-22 Effects of Communication and Leadership Styles on Information Flow in Public Universities in Kenya; A Case of Maasai Mara University
Maryann Mwangi, St. Paul's University,	E2014-23 Health Education and responses by the education system to HIV and AIDS prevention and management among Institutions of Higher learning in Kenya
Racheal Nyambura Wanjohi (Mt Kenya University) & James Kay (Kabarak University)	E2014-25 Influence of Facebook Usage on Psychological Adjustment of University

	Students in Kenya
Crispin Wandera Ojwang'a, Aga Khan University	E2014-26 Integrating Technology in the Language Classroom: A Revolutionary Approach
Pamela Karambu Muriungi (Kenya Methodist University) & Phinius Muriungi Rinkanya (Kaaga Boys' High School)	E2014-64 The Effects of Socio-Economic Status on Student Performance in Urban Slums of Laikipia County, Kenya

Symposium E2014-B

Venue: KLAW 5

Date: 17th July 2014

Time: 8.30am-11.00 am

Chair: Prof. Esther Kibor.

Rapporteur: Ms Faith Yator

Author(s)	Title
Bernard Chemwei, & Sharon Jerotich Koech, Kabarak University	E2014-60 Influence of Teacher-Educator Characteristics on the Integration of ICT in the Teaching and Learning Process in Teacher Education in Kenya
Lucy Karanja, Kabarak University	E2014-54 The effect of nutritional counselor's knowledge of diabetic management on patient's recovery rate: case of Provincial General Hospital, Nakuru
Eric Okwako, Masinde Muliro University of Science and Technology	E2014-55 The Effect of Reading on the Mastery of English as a Second Language
Simiyu Kisurulia & Fr. Martin Tanui, University of Kabianga,	E2014-56 The Role of Cash Transfer Programs in Development in Kenya
David Gitau Turuthi, Akuisi Sec School, Solai,	S2014-13 Digital Educational Resources: Making and Donating Swahili Sayings Motion Pictures

Symposium S2014 - A

Venue: KLAW 4

Date: 17th July 2014

Time: 9.00 am –11am

Chair: Mr. Philip Ragama

Rapporteur: Mr. T. Sawe

Author(s)	Title
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Andrew Kipkebut, Kabarak University	S2014-19 Evaluation of wearable technology for Ubiquitous mobile Computing and Quality of Life
George Nashon Ocholi and Patroba Achola Odera; Jomo Kenyatta University of Agriculture and Technology	S2014-21 Analysis of Changes in Settlement and their Implications in Kajiado County
Nicodemus Aketch Ishmael & Dismas Ombuya, (Kabarak University) & Susan Mwangi (St. Paul's University)	S2014-20 Evolving Computer Ergonomics For The Disabled In The Society
Abel Nyaribo Kaburi and Patroba Achola Odera, Jomo Kenyatta University of Agriculture and Technology	S2014-22 GIS and Remote Sensing Support in Watershed Conservation and Management; Case study of the Upper Gucha Catchment – Kenya
Gilbert Nyakundi Okebiro, Mt. Kenya University – Lodwar campus	S2014-24 Water Sanitation and Health in Arid and Semi-Arid Areas
Elijah Lwevo, Christopher A. Onyango, Nyando V. Violet &, Chadwick A. Digo (Egerton University), Abdisemet Bulle (Mercy Corp, Wajir County)	S2014-25 Knowledge System of Land Use Potential (KSLUP) for Food Security among Pastoralists: A Case Study for Wajir County
Kenneth O. Dinga (<i>Jomo Kenyatta University of Agriculture and Technology</i>), D.B.O Konditi (<i>Multi-Media University College of Kenya</i>), H. Ouma (University of Nairobi)	S2014-26 Modeling of Malignant Tumor Using Finite Volume Time Domain
Edwin Kimeli (University of Eldoret) and Joshua K. Kibet (Egerton University)	S2014-27 Molecular Modeling of Toxic Indole Derivatives from High Temperature Cooking
Ombati O. Denis & Ndun'gu N. E (JKUAT) and Ngoo M. L (Multimedia University, Kenya)	S2014-68 Determined Blind Source Separation Using Novel Machine Intelligence

Symposium S2014 - B

Venue: K LAW 4

Date: 17th July 2014

Time: 9.00 am –11am

Chair: Mr. N. Karie

Rapporteur: Ms. Ruth Oginga

Author(s)	Title
Ojijo Mourice Otieno School of Science Engineering and Technology, Kabarak University	S2014-66 Internet over Digital Terrestrial TV Broadcast Networks: A Proposal for Bandwidth Allocation for Internet Piggyback
Andrew Kipkebut and Timothy sawe, Kabarak University	S2014-64 A survey on Mobile phone Related issues in WI-FI calling
Vundi Nason, St. Paul's University,	S2014-36 An Evaluation Of The Community's

	Resilience In Coping With The Global Climatic Change: Case Of Mwala District, Machakos County
Simon Peter, University of Dar es Salaam, Tanzania	S2014-37 Smart phone applications usage and its impacts on university students learning in Tanzania
Maghanga C.M (Kabarak University), Mghendi M.M. (University of Eldoret), Niklasson G.A and Granqvist C-G.(Uppsala University, Sweden)	S2014-65 Influence of Deposition Parameters on the Optical Properties of DC Magnetron Sputtered Tungsten Oxide Films
P. Kemei and J. Mbugua, Kabarak University.	S2014-29 Network Digital Forensic Framework for Managing Security Incidents in Organizations

Venue: KLAW 4

Date: 17th July 2014

Time: 9.00 am –11am

Chair: Dr. S. Muhanji

Rapporteur: Ms. Daisy Bowen

Author(s)	Title
Joyce K. Nyabuti , Kabarak University	B2014-15 Effect of Motivation in Employee Performance in the Kenya Civil Service
Gilbert Nyakundi Okebiro, Mt.Kenya University – Lodwar campus	B2014-17 Devolved Governance and Leadership in Pastoral Regions in Kenya
Gilbert Nyakundi Okebiro, Mt.Kenya University – Lodwar campus,	B2014-18 Motorcycle (Boda-Boda) as Emerging Business for the Poor in Transport Industry and Sustainable Development in Modern Kenya
Martin C. Lubowa, Kabarak University/Bugema University	B2014-19 The Effect of Moonlighting on Service Quality among Public Universities in Uganda: The Case of Makerere University and Mbarara University of Science and Technology
Albert Odiwuor Apiyo and Bernadette Kombo; Technical University of Mombasa;	B2014-20 Poverty Reduction and Asset Based Community Development Approach: Remedy for Kenyan County Governments
Joseph Ng'ang'aNjuguna & Ahmed Al-Amin Abdalla; Technical University of Mombasa.	B2014-21 Assessment of Quality Management practices, tools and techniques: the case of learning institutions in Kenya
Kangogo J.Nancy & Asienga C. Irene School of Business, Kabarak University, Kenya	B2014-30 Factors Affecting Non-Performance of Personal Loans in Banking Industry: Case Study of Tier One Banks In Kenya

11.00 - 11.30	Tea/Coffee Break / Exhibition
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Plenary Session

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

Venue: KLAW 5

Chair: Prof. Jacob Kibor

Rapporteur:

Prayer: Rev. Simon Kiuta

Time	Activity
11.30 a.m. -12.30 p.m	Invited Speaker: Dr. Bitange Ndemo- University of Nairobi: Topic: Development of Sustainable Innovation Ecosystems

12.30 pm – 2.00 pm	Exhibition / Lunch Break
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Venue: KLAW 5

Date: 17th July 2014

Time: 2.00 – 4.30 pm

Chair: Mr Antony Somba

Rapporteur: Mr. Walter Chemjor

Author(s)	Title
Oroko Dismas Ombuya and Ishamael Nicodemus Aketch; The Technical University of Kenya,	E2014-28 The Role of ICT in Education: ICT, a Propeller Of Education To Greater Heights
Oroko Dismas Ombuya, The Technical University of Kenya	E2014-29 The Role of ICT in Education in the growth of Education
Daniel Kimemia and Winnie Ndeta, St. Pauls University	E2014-30 Effectiveness of Mass Media in Youth Education Programmes Concerning the Use of Contraceptives: A Case of University Students in Nairobi
Gilbert Nyakundi Okebiro, Mt. Kenya University, Lodwar campus,	E2014-31 Using Unmodified Real Things in Teaching Sciences as Innovative and Creative Method in Educational System
Ekonya Kennedy Malika, Laikipia University, Kenya	E2014-32 Role of Information Technology in Education Advancement in Kenya
Leen Kavulavu, M.A. , Moi University,	E2014-34 Western Education on the Changing roles of Women: The Case of Idakho Community, Kenya
Viola Chepngeno, Frederick Mukabi and Anne	E2014-35 Managing the Post-Disaster Trauma;

Kangethe, Kenya School of Government, Embu.	Effects and Experiences in Kenya
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Venue: KLAW 4

Date: 17th July 2014

Time: 2.00 pm- 4.30 pm

Chair: Dr. Sella Kebenei

Rapporteur: Mr. Eliud Michura

Author(s)	Title
Barasa Peter Wawire, Kenya School of Government Embu Campus	S2014-28 Multi-Agent Based Extension Support System for Horticulture
Ruth Anyango Oginga, Kabarak University	S2014-30 Optimized high speed SMS based alarm system for home security
Mr. Erac Ombati and S Musyoki (JKUAT) & V.K. Oduol (University of Nairobi)	S2014-31 Performance Analysis of FIFO, Priority and Weighted-Fair Packet Queuing Mechanisms in Manets
Bonface Jiveri (Maseno University) & Sylvester Anami (Technical University of Mombasa)	S2014-32 Potential of Lubricating Oil (MGALO) and organic Bio-fertilizer production from Marine Green Algae (Patent Number, KE/UM/2012/00295)
Samuel Bior Nathaniel Garang., University of Eldoret.	S2014-33 Redirecting the Wheels of Natural Progression: Synthetic Biology and the African Biotechnology Revolution
Kaleb A. Mwendwa &, Agevi Humphrey (Masinde Muliro University of Science and Technology), Tsingalia M. Harrison (Moi University) and Onzere Ernest (St. John the Baptist, Likuyani Secondary School)	S2013-34 Efforts towards Increased Forest Cover as a Measure to Mitigate Effects of Climate Change
Kenneth O.Dinga (Jomo Kenyatta University of Agriculture and Technology), D.B.O Konditi (Multi-Media University College of Kenya) &, H. Ouma (University of Nairobi)	S2014-38 Solving Maxwell Equations for using Finite Volume Time Domain

Venue: KLaw 4

Date: 17th July 2014

Time: 2.00 pm- 4.30 pm

Chair: Dr. Waiganjo

Rapporteur: Mr. Kitui

Author(s)	Title
Ngeno Williter Chepkemioi Rop, Mosoriot Teachers College;	B2014-22 The Effect of Employee Interpersonal Relationships on Retention of Millennial Employees in Private Hospitals in Bomet and Kericho Counties, Kenya
John Boit, Stephen Chelogoi & Silas Chemwaina ; Moi University, Eldoret	B2014-23 The Role of Gender in the Performance of Small and Medium Enterprises: A case study of Kilibwoni Division, Nandi Central District, Kenya
John Boit & John Changach; Moi University, Eldoret	B2014-24 The Role of Technology in Empowering Women: Global Perspective
Mukhwana M. Duncan, Moi University	B2014-26 Unsustainable Finances of the Sugar Economy in Kakamega County
Kerre P. M. (Moi University), China, S. S. and Neyole, E. M.(Masinde Muliro University of Science and Technology)	B2014-27 Urban Planning Strategies for Disaster Risk Reduction in Urban Areas In Kenya
James Kay & Emily Tumwet, Kabarak University	B2014-28 The Role of Staff Counseling in Promoting Work Engagement and Productivity: A case of Kabarak University
Bowen D. J. Chebet & Irene Asienga, (Kabarak University), Gogo O. Julius. (Daystar University)	B2014-29 Effectiveness of Marketing Mix Elements in Enhancing Students' Enrolment in Institutions of Higher Learning: Case Study of Two Private Universities in Kenya

4.30 pm - Tea/Coffee/Snacks

Day 4 – 18th July 2014

Time: 8.00 a.m. – 8.30 a.m.

Venue: KLaw

Facilitator: Ms. Carolyne Sogomo

Activity
Registration

Venue: KLAW 5

Date: 18th July 2014

Time: 8.30 – 11.00 am

Chair: Dr. Kageni Njagi

Rapporteur: Mr. Antony Somba

Author(s)	Title
Martin Kurgat, Moi University,	E2014-37 Impact of Media Ethics on the Practice of Journalism in Kenya
Chebii jerop stella, Abraham Kiprop Mulwo and Caren Cherop; Moi University, Eldoret	E2014-39 Navigating the Challenges of Menstruation and Schooling among Adolescent Girls Living in Informal Settlements in Kenya
Cherotich Mung'ou (Kabarak University) & Tom Kwanya, (University of KwaZulu-Natal, Pietermaritzburg, South Africa)	E2014-40 Perception of youth towards the youth-friendly health services: A case study of Mt Elgon Sub-County Hospital
Jacinta N. Kingo'ri , Peter Odera and Wycliffe Oboka; Masinde Muliro University of Science and Technology	E2014-41 Post-Traumatic Stress Disorder among Children Survivors of 2007/2008 Post-Election Violence in Nakuru County
Simon Nderitu, Mount Kenya University	E2014-42 Prevalence of 'Best Practices' strategies of Educational Supervision on Effectiveness of teaching in Primary and Secondary Schools in Nyandarua County, Kenya
Teresia Njeri Mugendi and Chirchir Mathew Kimeli (Kenya School of Government Embu), Christine Wasanga & Margaret Mwenje (Kenyatta University)	E2014-43 Psychosocial Effects of Palliative Care-Giving on Primary Care-Givers of Elderly People with Advanced Cancers in Manyatta Constituency, Embu County, Kenya
Mwangi, John & Thuo, Eric .G (Mount Kenya University); Mwangi, J. Gitau. (Maryland University, University College); Wabore, J. Ngige (Jomo Kenyatta University of Agriculture and Technology) and Mwangi, K. Harrison (Mount Kenya University Nakuru Campus)	E2014-44 Revamping Critical Thinking Aspect as the Operation Principle in education for Creativity and Innovation towards vision 2030

Venue: KLAW 4

Date: 18th July 2014

Time: 9.00 am -11.00 am

Chair: Mr. Joshua Ogal
 Rapporteur: Mr. M. Ojijo

Author(s)	Title
James. A. Obar & Symon M. Mahungu (Egerton University) & Alfred. A. Shitandi (Kisii University)	S2014-39 The abundance of Lactic acid bacteria in the gastrointestinal tract of Lake Victoria Nile Perch
Wesley K. Ng'etich, Chadwick A. Digo and Elizabeth M. Mwangi ((Egerton University), Jackson Kiptoo (Jomo Kenyatta University of Agriculture and Technology)	S2014-42 Physico-chemical properties of clays used for cosmetic purposes in Kenya
Chadwick A. Digo, Elizabeth K. Mbutia, Joseph W. Matofari, Wesley K. Ng'etich, James A. Obar ² and Bernedette N. Misiko; Egerton University	S2014-43 To Consume or not to Consume Traditional Fermented Milk (<i>Mursik</i>) of Kenya?
Geoffrey K. Kinuthia (Daystar University), Christopher O. Anjili and Johnny M. Ingonga & Elizabeth M. Kigonda (Kenya Medical Research Institute) Ephantus W. Kabiru & Nicholas K. Gikonyo (Kenyatta University)	S2014-44 Toxicity and efficacy of aqueous crude extracts from <i>Allium sativum</i> , <i>Callistemon citrinus</i> and <i>Moringa stenopetala</i> against <i>L. major</i>
Kibetu Kinoti, Chuka University,	S2014-46 Using GIS to select ideal sites for Municipal Wastes Transfer Station: A case study of Embu Municipality
Eunice Wangui Mwangi , Jomo Kenyatta University of Agriculture Technology	S2014-49 Assessing and monitoring agriculture crop production in Machakos County
Kelvin Moseki, Tea Research Foundation of Kenya (TRFK)	S2014-50 Clonal variations in the oil content and physico-chemical parameters of Kenyan tea (<i>Camellia sinensis</i>) seed oil
George Tom Ekisa, University of Eldoret,	S2014-51 Community Response to and Nature of Human-wildlife Conflicts in Amboseli Ecosystem, Kenya

11.00 – 11.30	Tea/Coffee Break
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Plenary Session

Time: 11.30 a.m. – 1.00 P.m.
 Venue: KLAW 5
 Chair: Prof. Ronald Chepkilot
 Rapporteur: Mr. Chebor
 Prayer: Pst William Koros

Time	Activity
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11.30 a.m. -12.30 p.m	Invited Speaker: Dr. Edward Sambili- Egerton University: Topic: Role of Research, Innovation and Industrialization in Attainment of Vision 2030
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1.00 pm -2.00 Lunch break/Exhibition

Venue: KLAW 5

Date: 18th July 2014

Time:200 pm – 4.30 pm

Chair: Prof. T.M.O Ayodo

Rapporteur: Mr Dave Bowen

Author(s)	Title
Claris Kasamba Kavulani and Kenneth Odhiambo, University of Kabianga	E2014-47 Role of Television in Alcohol Use among the Youth
John Rugutt, (Illinois State University, USA) & Caroline C. Chemosit (University of Kabianga)	E2014-48 What Percent of Variance in Teacher Professional Commitment can be attributed to School Leadership and Teaching Experience? A Multilevel Analysis Approach
Tsawe-Munga wa Chidongo, Pwani University	E2014-50 Causes of slaying of Elderly People in Kilifi County from 2002-2014
Jane Ingado Misigo (Kabarak University) & Lilian Ayiro; Maseno University	E2014-51 Social Exclusion, Class attendance and availability of counseling Services to Orphans in Secondary Schools in Kenya
David Melita Katitia, Maasai mara university	E2014-52 Status ICT Education Policy Implementation in Secondary and Primary Schools In Kenya
Gidudu Hannah Lunyolo (Uganda Christian University/ Kabarak University), T.M.O Ayodo & Betty Jeruto Tikoko (Kabarak University)	E2014-53 The Challenges of Women Administrators on the Management of Schools: A Case Study of Female Head teachers in Mbale District
Kabutiei, J. K.,(Mercy Njeri Secondary School, Nakuru); M. C. Chepchieng & B.E.E. Omulema, Egerton University, Njoro	E2014-66 Perceptions on the Effectiveness of Guidance and Counselling Proramme in Enhancing Students Career Competencies: A Case of Secondary Schools in Koibatek District, Kenya

Venue: KLAW 4

Date: 18th July 2014

Time: 2.00 pm -4.30 pm

Chair: Dr.Philip Otieno

Rapporteur: Ms Elizabeth Okumu

Author(s)	Title
Caren C Kurgat, Anthony B Mathenge & Joshua K Kibet; Egerton University	S2014-52 Computational Modeling of Nicotine from Tobacco Burning and Mainstream Cigarette Smoking
Oyie Nicholas, JKUAT	S2014-54 Impact of Mobility dynamics in Resource Allocation in Femtocell Network
Bernard Ochori Ogechi and Patroba Achola Odera, Jomo Kenyatta University of Agriculture and Technology	S2014-55 Improvement of area accuracy in general boundary areas in Kenya: Case study of Juja – Kiambu County
Martin Kiio Musa and Patroba Achola Odera, Jomo Kenyatta University of Agriculture and Technology	S2014-56 Land Use Land Cover Changes and their Effects on Food Security: A Case Study of Kiambu County – Kenya
Jones Mwendwa Mwangangi and Patroba Achola Odera; Jomo Kenyatta University of Agriculture and Technology	S2014-57 Management of Crime using Geographic Information Systems and Remote Sensing in Northern Kenya: A Case Study of Samburu County
Edwin Kimeli (University of Eldoret) and Joshua K. Kibet (Egerton University).	S2014-59 Molecular Modeling of Toxic Indole Derivatives from High Temperature Cooking
Catherine W. Waweru, University of Eldoret,	S2014-60 Relative Efficiencies of Line Transect and Point Count Census Techniques: A case study of University of Eldoret
Ragama P.E, B. Jepchumba, W. Vusha, E. Koech (.Kabarak University), C. A. Oduori , R.A. Opole and R.A. Nungo (Kenya Agricultural Research Institute)	S2014-61 Crop Modeling on Diseases and Pest of Finger millet at Alupe, Kenya

4.30 pm - Tea/Coffee/Snacks

ABSTRACTS

Ex2014-01 Torque Controller (Torqco) for Alternating Current Induction Motors

Dennis Kibet Maritim

Technical University of Mombasa, Faculty of Engineering and Technology, Department of Electrical and Electronic, P.O.Box 90420-80100, Mombasa, Kenya

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Abstract

Torque controller is an electronic device with a great potential for usage in 3-phase induction motors in all industries. It comprises of power diodes, insulated gate bipolar transistors, thyristors that are partitioned in working blocks to achieve a smooth starting by controlling the initial torque of the motor. The device is critical in starting induction motors from a standstill status which is quite energy demanding. From the moment a machine is switched on, all the requisite energy to magnetize the motor, to provide acceleration force to the rotor coupled to the load alongside kinetic energy to overcome force of inertia besides electrical and mechanical losses must all be accounted for. To achieve this, at full supply voltage allows a significant surge of current that induces a considerable amount of stress on the entire system including the adjacent appliances. In light of the above cited energy requirements and losses, it is necessary to develop a device that will enable machines routinely overcome the stresses caused by the energy demand through the regulation of the initial torque. The device integrates electric force, electronic techniques, computer techniques and modern control theory. It is the new generation product to replace the conventional star-delta starter, self coupling voltage-drop starter and magnetic control voltage-drop starter. The torque controller device is an improved model that is devoid of switching disconnection, harmonic distortion and eliminates torque oscillations which cause rapid wear and early machine failure. With these achievements the novelty of the torque controller can be demonstrated in energy consumption among the industrial appliances. Adoption of the device has the potential of improving efficiency and the life span of machines.

Ex2014-02 Advanced Water Pump that uses Road Bumps to Pump Water

Wekesa Sindani Felix

Masinde Muliro University of Science and Technology, Faculty of Science, Department of Physics, P.O Box 190 Kakamega

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Abstract

The principal objective of this paper is to demonstrate the capability of new inventions to solve Aridity and Desertification, Food and water shortage in North-Eastern and Turkana part of Kenya and to improve agriculture. After watching the News on TV about how people are suffering in Turkana because of drought and famine, my conscience as a Physicist mademe to come up with a way of solving the problem. The people of North Eastern part of Kenya have for a very long time experienced famine and drought. The Govt. has tried solving the problem by

digging boreholes in the region, a step that has helped people living in those regions. The advanced water pump if improved and implemented can highly contribute to solving this problem. The system can be developed on weigh bridges of a busy highway or under a bridge for efficient water supply. The cost of operation after establishment is less over a long period of time. The pump uses in accordance the principles of Physics as follows; Pressure, Magnetism and Gravity. The Sun also plays a vital role in operation of the water pump. The project can be applied in agriculture for irrigation, water production for both animal and home use. Industries that require large amounts of water can also employ it.

Ex2014-03 SmartCERT: A Radio Frequency Identification (RFID) based solution

Amugada Stephen Ambani
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Abstract

The Degree Certificate awarded by a University is an asset of prime importance in an individual's life. Circulation of fake degree certificates is a menace to the society, and a threat to the integrity of both the certificate holder and the educational institution that has awarded the certificate. Hence, there is a pressing need for universities and other learning institutions to adopt a process that can ensure security of information and authenticity of the certificate issued. Fake certificates that could easily pass for genuine ones are conveniently produced in the backstreet of Nairobi, Mombasa, Kisumu and other major towns in Kenya. While the authorities have managed to burst some of the rackets involved in this crime, the practice is widely believed to be going on, thanks to technology and its sophistication. However, this situation cannot, and must not be left to continue. SmartCERT, a Radio Frequency Identification (RFID) based solution, enables universities to curb the problem of fake degree certificates and forgery of mark sheets. Using SmartCERT, a university can award certificates with an embedded RFID tag that is encoded with the holder's name, date of graduation, type of degree and entire transcript, photograph and biometrics (fingerprints), all digitally signed by the university authorities. Smart Cert addresses these issues by providing means of linking certificates from multiple certifying authorities with features useful in combating identity theft and invasion of privacy. SmartCERT also enables potential employers, foreign embassies, other universities and other stakeholders to read the data embedded in the RFID tag using an interrogator, and to verify the identity of the certificate holder and authenticity of the certificate.

Ex2014-04 Privatization of corrections: A case study of Kenya prisons.

Alex Kimani Waweru
Kabarak University, School of Law.
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Abstract

The criminal justice in Kenya has faced rising numbers of inmates and overcrowded prisons conditions. The Kenya government has been doing a dismal job in its administration of correctional institutions. Managing cost have soared and prisons are being kept in conditions that shock the conscience and prisoners are often coming out worse than when they went in. recent study in the USA has revealed that private prisons save more 10 – 15 percent saving on operation cost. This paper demonstrates the harsh conditions in our prisons and way in which they can be addressed. This paper uses case methodology approach to espouse the adoption of private prisons in Kenya, in order to address the problem. The paper also recommends and concludes that the government should be expended to adopt private prisons systems of management.

Keywords: prisons, prisoners, harsh conditions, private prisons.

Ex2014-05 Monde System of Governance

Adinda L and Yefta P.

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Abstract

Governance for centuries has been a challenge in the world. The numerous coups experienced most notably in modern Africa attest to this. All this crippling governance has led to formation of autocratic governance which are less popular amongst the citizens in Africa and across the world at large. Democracy has been downplayed by granting it lip service. This has resulted to some countries plunging into war, experiencing unnecessary demonstrations for example the underwear demonstrations in Russia, and coups as well as tribal animosities. It is with this in mind that we carried out a study on 15 democracies across the world some of which included Uganda, Kenya, Tunisia, Nepal, Tunisia, Britain and Swaziland. A desktop review of the system of governance in these countries was carried out using publications, literature available online and books accessed in MKU library. In addition a descriptive study of 8 monarchies across the world was carried out. The results of this review will be presented at the conference. In summary, both democratic and monarch system of governance have strengths, limitations and weaknesses. The review will demonstrate that merging the two systems i.e. democracy and monarchy into a hybrid system ‘MONDE’ will lead to better governance.

Key words: Monde, Democracy, Monarchy, Governance.

Ex2014-06 School Management System (geinan student manager)

Barasa Mamati Godliphas

Kabarak University, Department of Education

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Abstract

Geinan student manager is a database management system developed to manage major aspects of a modern secondary school in kenya. The name “geinan ” is an acronym for my name Godliphas,

my son Einstein and my wife Anne. It was developed using Microsoft access database application which is part of Microsoft office suite. Microsoft access was chosen because about 90% of people use Microsoft office. This software demonstrates the power of Microsoft access database and its potential; it demystifies the notion that microsoft access is just an application package!

The system can work in a multi-user environment and also in stand-alone computers. The design approach is modular. The following are major modules and their functions

1. School leaving certificate module: used to generate students leaving certificate
2. Week management/Teacher on duty module: this module assists the teacher on duty to manage students permission to leave school, generate weekly reports..
3. Academic records management module: this module stores all students marks and generates term report cards, merit list, subject analysis..
4. Lesson monitoring/Missed lessons: this module manages lesson attendance by teachers and records all missed lessons per week, term and year
5. Discipline records management: this module manages all discipline records of a student and generates relevant reports
6. Enrollment module: this module gives report of enrollment at any given moment in terms of age, class, stream, gender...
- 7.

The system is an evolutionary prototype and has been tested in three schools in Bungoma County all yielding positive results even though development is ongoing.

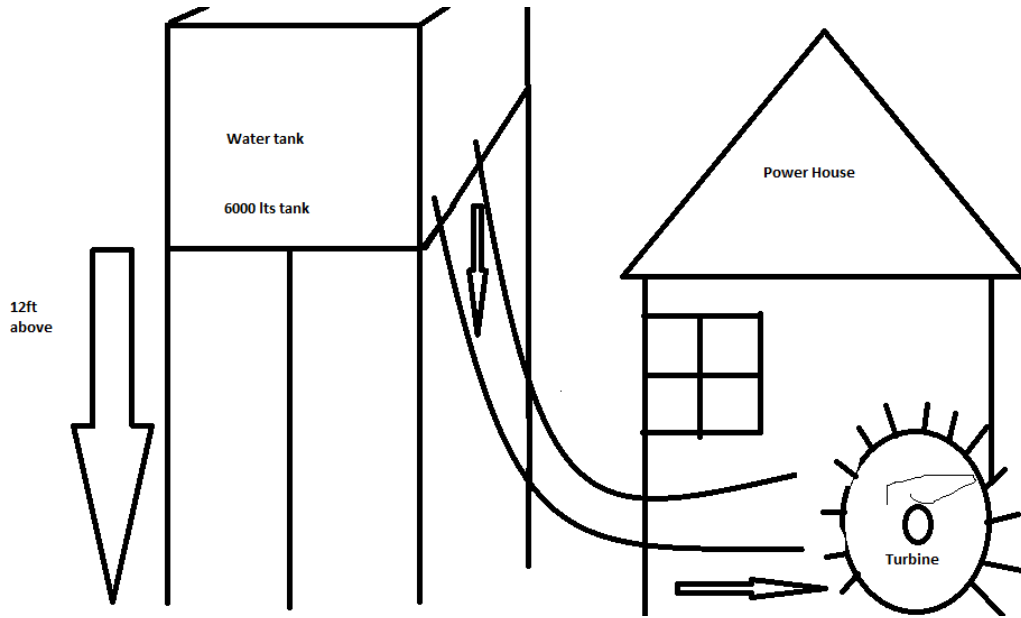
It is not a doubt that this system will improve management and promote excellence in high schools in this era of digital dispensation.

Ex2014-07 Domestic Hydro-Electrical Generation

Chesang T,
Moi University, Department: Electrical and Communication,
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Abstract

In this day and age we try to generate electricity in the most environmental friendly way. This one among the most environmental friendly generation using water from a borehole. In this project i intend to generate electricity which would support any electronic appliances especially microwaves, iron box, e.t.c.This appliances are known to use an average of 750 watts. The diagram below shows an illustration of the project.



The generation involves tank raised 12ft above the ground with pipes running from the turbine. The turbine is then connected to the power house. A more detailed account is given below:

- i) **The Water tank** is a 6000 liters tank raised at 12ft above the ground by durable, strong and stable supports.
- ii) **The Pipes (Penstocks)** are p.p.r pipes with the end connected to the tank are 4inch in diameter is subsequently reduced so that the ends at the turbines are 1/2 inch in diameter.
- iii) **The Turbine** is an induction generator coupled to a metallic wheel.
- iv) **The power house** houses the consumer control unit. It controls the power from the induction generator and then supplies power for domestic use.

Operation

At the first instance, water is pumped using a fuel powered pump. At 12ft height, the water is let to run down the penstocks (pipes). As the diameter of the pipes reduces from 4inch to 1/2inches, the water gains high pressure which is able to rotate the wheel coupled to the induction generator. As the wheel turns, the induction generator generates enough electricity for domestic use. The water that is used to turn the wheel is then directed by the return pipes back to the borehole; therefore the water is kept in circulation throughout and if domestic consumption and atmospheric evaporation are considered, about 50lts are lost per day hence water can be circulated throughout the year. Water is available throughout the year in most parts of Kenya hence; this project will work in most of Kenya.

Ex2014-08 Prosecution should be an Independent Body in Kenya by 2030

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Abstract

it is my major concern as a criminalologist to note to kenyans as a whole that without prosecution becoming independent body there would be very many loopholes in the criminal justice system, as the name suggests CJS, is the entire system of criminal prevention, detection, apprehension, trial and punishment to bring reformation to the offender and fair justice to the victim. We should note that the basic components of criminal justice system are as follows and should be independent; the police, prosecution, courts and lastly corrections.

The method that this provision should be applied to Kenya is by imitating the common wealth countries which use prosecution body as independent body. Secondly the police should be relieved of this duty because where the work of the police ends is where the work of the prosecutor starts, this is to avoid irregulation in the system.

Kenya being common wealth country, democratic country and works with the rule of law that with it have criminal procedure puts the burden of proof on the independent prosecution body. Presumption of innocence is a provision required in all member countries of United Nations organizations which Kenya is part of. Such jurisdictions allow the defendant the right to legal counsel and provide any defendant who cannot afford their own lawyer with the lawyer paid for at public expense.

In conclusion, there are people in question sitting on this opportunity to allow them get away with their crimes and to avoid change to new Kenya, this must be thwarted at this tender age before 2030. The document recommends the criminal justice system to implement this to come up with fair justice and equal opportunity to all.

Key words: Prosecution, criminal, justice system, the police, corrections and the courts.

Ex2014-09 Lack of Service Quality in Customer Satisfaction as a Catalyst of Innovation

Geoffrey Kiprono Biwott
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Abstract

Today, innovation performance is a crucial determinant of competitiveness and national progress. Moreover, innovation is important to help address global challenges, such as customer satisfaction, service quality and sustainable development. But despite the importance of innovation, many companies face difficulties in strengthening performance in this area. Indeed, many have seen little improvement in productive performance in recent years despite the new opportunities offered by globalization and new technologies. Service quality influences customer satisfaction because with an excellent service provided to the customers, their needs and expectations are met and as a result it improves customer satisfaction and create a good image of the company and bring positive reactions to potential customers mind since they expect excellent treatment if they incur problems while shopping. Customer satisfaction is a by-product of

innovation. It has received much attention in the last two decades from both practitioners and researchers as one of the strategies firms can employ to remain competitive. Despite this attention, little empirical research has been performed about relationship-marketing practices among SMEs, especially those in developing countries. This study is intended to investigate the effects of service quality on customer satisfaction in Kitale town. Stratified sampling was used to divide the Central Business District in terms of streets. Systematic random sampling was used to select SMEs from each street to obtain a sample size of 146 SMEs where customers were interviewed from each SME making a total of 146 customers involved in this research work. Findings reveal that service quality highly affects customer satisfaction positively ($\beta_2=0.396$, $P<0.05$). All the beta values were significant at 0.05 level of significance. Hence it is recommended that managers should focus on developing appropriate competencies in service quality since it has a positive impact on customer satisfaction.

Key words: service quality, customer satisfaction

Ex2014-10 Macro-Algal Dyes as Potential Industrial and Medicinal Products (Patent No.: KE/P/2013/001918)

Njiru Christine Wakuthii

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Abstract

Synthetic dyes have been in use for a long time in various fields for different purposes. However, their continued usage has presented challenges due to non-biodegradability. The users are thus exposed to health risks as well as potential environmental pollution occasioned by chemical components. Despite the knowledge on risks of synthetic dyes, alternative safer sources are not widely used probably due to lack of knowledge or inadequacy of raw materials. It is known that algae have different pigments (chlorophyll, carotenoids and biliproteins) which give them their characteristic colors with potential for exploitation in different socioeconomic sectors. The algal samples were collected from Indian Ocean, identified and utilized for pigment extraction. The macro-algal pigments were extracted using water or organic solvents then purified and analyzed for toxicity and biodegradability. The potential of dye application either as food supplements or utilization in the pharmaceutical industry were evaluated since they are perceived to be safer and cost effective under mass production.

Keywords: Pigmented marine algae, dye extracts, organic solvents.

MAIN CONFERENCE ABSTRACTS

Symposium E2014

E2014-02 A Cognitive Linguistic Analysis of Sexual Dysphemisms and Euphemisms in South Nyanza Dholuo

Awino N. Cellyne, Garissa University College, nyajeracell@yahoo.com, 0724560910
Bichang'a W. Nyaigoti – Garissa University College, chachanyabi2012@yahoo.com,
Tel: 0725361991

Abstract

In all cultures worldwide, the subject of sex is a major concern in life and is likely to elicit embarrassment. This is why sexual language is subject to censoring. It is therefore a potent source of euphemisms for people from all walks of life. This paper is part of an empirical study that examined sexual dysphemisms and euphemisms in the Kenyan Dholuo using Cognitive Linguistics Approach. The paper aims at identifying and explaining the sex-related dysphemistic words and phrases in Dholuo, as well as accounting for the cognitive processes in the creation of sex-related euphemisms and to discuss the relationship between age and gender in the usage of euphemisms. The study used both purposive and simple random sampling techniques to obtain a sample of eighteen native Dholuo speakers for the study (nine were males and the other nine females). From the findings of this study, the paper observes that men use more taboo words than women. When a man uses taboo words, he is viewed by the Luo society as a dignified individual while if the same words are used by a woman she is considered uncultured, and is castigated. This illustrates the patriarchal nature of the Luo that values men over women which in turn hinders the women's socio-economic development. This paper recommends a comprehensive research be carried on all native languages in a bid to compile native language dictionaries in the attainment of the cultural pillar in line with vision 2030.

Key words: Cognitive Linguistic Approach, Dysphemism and Euphemism.

E2014-03 A Survey of Challenges to Contextualization of Selected Dimensions of Religiosity on Unity of Christian Church in Primary and Secondary School Communities in Nyandarua County, Kenya

Simon Nderitu, Department of Humanities, Mount Kenya University.
simonpeter@yahoo.com

Abstract

Postmodern religious world is characterized by a number of outstanding religious trends, including the emergence of new religions and challenges of contextualization of particularistic aspects of any religion in a given community. A survey was carried out in forty primary and secondary school communities in Nyandarua County in February 2014 involving teachers and principals. Religious commitment, emerging dimensions and innovations were investigated in five dimensions, namely, doctrinal, church membership, evangelism, community service and prayer. The reviewed version of theoretical framework first developed by Hilty & Morgan guided

the study, (Küçükcan, 2010). It claimed that religious commitment of Christians can be measured using the identified religious dimensions as a guide to informed decision making and a variety of other uses of religious data resulting from religious research. Data was collected and analyzed using Statistical Package for the Social Sciences (SPSS, 11.5) and descriptive narratives. Key findings on challenges to contextualization of one's personal religion in the school community and collectively identified by 14 (28%) participants were; 'differences in faith' and negative attitude towards religion among non-Christian peers, emergence of different faiths, biblical illiteracy and cultural differences were the main obstacles. Recommendations made included the need for school wide dialogues guided by Biblical teachings, shared vision, and mission and core values. The conclusion was that contextualization of Christianity was a viable task if its relevance was expanded to meet a wide spectrum of human needs.

Key words: Dimensions of religiosity, Religious commitment, contextualization of Christianity.

E2014-04 The Effect of Teacher -Student Ratio on Academic Performance in Universal Secondary Schools Uganda

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Abstract

The need for establishing the relationship between teacher-student ratio and the academic performance in secondary schools under Universal Secondary Schools was significant to find the solution to the challenges caused by increased student-ratio in the teaching learning process. The study was guided by the general question 'What is the effect of teacher-student ratio on academic performance in universal secondary schools?' The conceptual frame work analyzed variable that affect academic performance in selected secondary schools. The Case study Design was used in the study. The study population was 5 head teachers, 150 teachers, 50 PTA members, 1,000 students. The sample size for the study was 5 head teachers, 50 teachers, 25 PTA members, and 82 students. Purposive and simple random techniques were used to select respondents. The study utilized interviews, questionnaires and focus group discussion to collect data. Data was analyzed using descriptive analysis, tables, graphs and pie charts. The researcher anticipated that the study would provide more insights for further researches basing on its new data and recommendations provided. Further, given the existing gaps in the available research, the study will provide a new context relating to the secondary schools. The key findings of the study were that; all the schools under the study had experienced increments in school enrolment as a result of the USE program and there was a big increase in student enrolment in all the schools. All schools had an average teacher-student ratio of between 1:64 to 1:85 which was high according to the ministry of education and sports standard that recommended the teacher-student ratio of 1:40. The big numbers of students in classes affected the quality of learning as the teachers could hardly identify the strength and weaknesses of the individual students. This study is significant to investigators and policy makers

Key Words: Universal Secondary Education, Universal primary Education, Academic performance. Secondary schools.

E2014-05 The Level of Job Satisfaction of Secondary School Teachers in Transmara West District , Kenya

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Abstract

This study was undertaken to find out secondary school teachers' level of job satisfaction in Transmara West District, Kenya. This research adopted a Cross-sectional design with stratified random sampling technique to select the target schools. Out of the 16 registered public secondary schools, 130 respondents were selected from a population of 182 teachers. Data was collected by the use of questionnaires and analyzed using both descriptive and inferential statistics. The study revealed that majority of secondary school teachers in Transmara west district were male (62.5%) and that most had professional qualification. It further revealed that the level of job satisfaction among respondents was very low. A notable policy implication of these findings was that there was need to tackle gender parity, implement policies, improve teachers' salaries and other fringe benefits in line with the economic trends and inflations and encourage school principals to increase morale of teachers by recognizing them and showing appreciation whenever they excel. Finally, teachers' motivation could be enhanced if they are given some considerable autonomy and trust.

E2014-06 Degree Students' Access to Academic Resources: a case study of Kisii and Laikipia Universities in Kenya

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Abstract

Growth in undergraduate student enrolment in Kenyan public universities is phenomenal as public universities admitted 25% more students in 2011/2012 compared to 2010/2011 academic year. This is a positive response to public and private demand for highly trained human resource necessary for social and economic development of the country. However, the unprecedented rapid growth is posing challenges to both students and management of Public Universities. The study was set to compare on access to academic resource by undergraduate degree students in local Universities in Kenya. Key to this paper will be students' access to morning and evening lectures, library and co-curricular activities. Kisii and Laikipia Universities were purposively chosen for the study. A cross sectional survey was used to select a target population of 607 and 332 parallel and regular degree students and 15 full time lecturers in Kisii University and 191 and 177 parallel and regular degree students and 25 full time lecturers in Laikipia University respectfully. The study adopted an analytical survey design as it was appropriate in analyzing varied data from different groups. Data was obtained by use of Likert

scale and close ended questions in the questionnaires. Key findings were that the parallel degree students had more challenges in accessing sports facilities, lectures and teaching and learning resources.

Keywords: Academic Resources, Parallel Degree, Regular Degree, University

E2014-08 An Investigation Implementation of ‘Best Practices’ Strategies in Educational Supervision on Effective Teaching on Effective Teaching as a Supervisor in Nyandarua County, Kenya

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Abstract

Researchers in educational supervision have studied many aspects of supervision, purposes, outcomes and challenges of supervision. The study was conducted March 2014 to establish the applicability of ‘best practices’ identified by a group of classical theorists as strong leadership, a clear school mission, preventing school violence, a safe and orderly climate, monitoring student progress and high expectations. The participants included but not limited to principals, deputy principals, senior teachers, heads of departments, class teachers, dean of studies and teachers without administrative post. The variables explored four broad areas of which the context of application of ‘best practices’ was expected. They were; school wide system, school wide expectations, and enabling environment and anticipated outcomes. Majority participants (78%, 84%, 78% and 70% respectively) indicated that best practices were in use in their schools according to yes/no scales used. When the participants scored a lower average when statements were elicited from them, notably low (30%) on school wide system variables. Synthesized theoretical framework (Fryer,2011; Pfeffer & Sutton, 2006) was used. Data was collected using survey questionnaire and interview guide, analyzed using Statistical Package for Social Sciences (SPSS) and descriptive statements. Based on the findings, it was concluded that there existed a divergence of opinions between teachers and administrators regarding the best practices. It was recommended that regular consultative meetings be held among students, teachers and school principals on how to provide the best school climate for best teaching and learning to be realized. The key words: School-Wide Behavior System, School Connectedness, Positive Relationships, Positive Climate.

E2014-09 An Investigation of the Effects of Postmodern Religious worldview on Faith and Practice among selected Religious groups in Nairobi

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Abstract.

The increase of postmodern philosophical approach to thought and practice will continue to be a great challenge to Religion. At the moment postmodernism is posing a great challenge to both

Christianity and Islam. The trend is worrying because it destroys the tenets of any religion. Crowe (2011) noted that it is a philosophical trend that affirms that there is no absolute truth on matters of religion and spirituality and which is characterized by relativism, loss of discernment, and upholds pluralism. Cheow (2013) also argues that postmodernism is responsible for a belief that truth is found on many other shades outside religion. The mindset is a challenge to religious authority. The case study was conducted in selected Churches and Mosques in Nairobi. Random sampling and an interview schedule was used to collect data. The Standard research ethics were observed. Data analysis was done using statistical package of social sciences. The finding revealed that postmodern world view has greatly impacted Christian and Islamic religions in Nairobi. For instance youth no longer articulate neither do they rightly define the truth. It was concluded that Professing Christians and even Muslims no longer practice their faith as thought in their sacred books. The true teaching must influence the condition of the heart, and which should be practiced. This isn't the case with modern religious groups because of the influence of postmodernism. It was therefore recommended that the religious groups engage in serious education of membership. Churches were encouraged to engage researcher on best way forward. Seminars should engage creating awareness.

Key Words: Postmodernism, world view, core tenets, doctrines.

E2014-10 Challenges Facing Beginning Teachers in Induction

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Abstract

The study was to establish the challenges facing beginning teachers in induction in secondary schools in Taita District. The study objectives were: to establish the status of induction and orientation of teachers, its benefits, establish the induction related challenges facing beginning teachers and to investigate the challenges facing induction and orientation. Descriptive research design was used for the study. Simple random sampling method was used to select schools for the study. Purposive sampling was used to select principals and teachers. Questionnaires were used to collect primary data from teachers and interview schedules for principals. SPSS was employed and descriptive statistics used to analyze the data. Study found out that some schools carry out induction and orientation of new teachers, some not. The study also found that the benefits of induction and orientation of new teachers fostered good relationships and team work. The process also helped in the integration of new teachers, created a sense of belonging which enhanced commitment and inculcated professionalism. The study further found that the general challenges facing new teachers were: unfamiliarity with curriculum, heavy workload challenge and understanding the working environment. It was also found that the major challenge facing induction and orientation of teachers was the inadequate time allocated for the process. Other challenges were: scarcity of valuable information for induction, lack of formal programmes for it, lack of skills in induction and orientation, lack of follow ups/evaluation and co-operation from other teachers. The study concluded that teachers in Taita District are inducted and oriented even though the time allocated for the exercise is inadequate. The study recommended that induction and orientation of beginning teachers should be taken seriously. The study further recommended

that a similar study be done elsewhere to examine the challenges facing induction and orientation of new teachers.

E2014-11 Challenges Facing the Persons with Disability (PWD) in Accessing Information and Communication Technology (ICT): A Case of Cyber Cafes in Eldoret Town, Uasin Gishu County, Kenya

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Abstract

In the 21st century, Information and Communication Technology (ICT) has become an integral part of learning and acquisition of knowledge for the Persons with Disability (PwD). Furthermore, excluding Persons with Disability towards access on ICT not only ignores them the right to acquire information and interaction with both the local and international audience but also creates a gap between them and the ability to acquire knowledge and communication. Lack of access and utilization of ICT by Persons with Disability becomes a challenge in developing their capacities and promoting understanding and at the same time promoting skills acquisition. Therefore, this paper investigated the challenges facing the Persons with Disability (PwD) in accessing ICT through cyber cafes in Eldoret Town, Uasin Gishu County, Kenya. The study was qualitative and quantitative in nature thus utilizing descriptive design. A sample of 59 persons of disability ranging from ages 18 to 45 years thus snowball sampling was used. The study established that lack of ICT awareness, costs in acquiring ICT, inadequate infrastructural capabilities to address in accessing cyber cafes, lack of government's commitment in establishing legislations that focus on the right of persons with disability to access ICT were among the challenges facing the PwD in accessing ICT in Eldoret Town. In conclusion, there is need to improve access of ICT as knowledge acquisition channel for Persons with Disability. The study recommends that there is need for the government to enable and encourage access of ICT towards participation of the PwD. Furthermore, there is need for people participation among other stakeholders to encourage access of ICT.

Key words: ICT, Persons with Disability (PwD), Cyber Cafes, Access

E2014-12 Chaplaincy for Transformative Leadership in Institutions of Higher Learning in the Light of Patristic Education: A Case Study of The Catholic University of Eastern Africa

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Abstract

Catholic Universities world-wide are academic communities which, in a rigorous and critical fashion, assist in the protection and advancement of human dignity and cultural heritage through research, teaching as well as service offered to the local, national and international communities. The main objective of these institutions is to infuse Christian presence into the University world, ensuring effective confrontation of societal problems. This objective can only be achieved if all divisions in the university are actively involved in the formation process. Chaplaincy is one of the divisions. As such there was a need to gauge how the chaplaincy at the sampled university engaged in this noble task. In order to do so, the patristic education was employed to assess how the chaplaincy is instrumental in utilizing the judgments of faculty and in the interest of academic standards, seek outside evaluations by scholars of acknowledged competence. Thus activities and programmes organized by the chaplaincy ought to ensure that the spiritual aspect of transformational leadership is inculcated to the students to reinforce the value and knowledge conveyed through academic programmes. This paper disseminates findings from an empirical study on chaplaincy in the preparation of transformational leaders at the Catholic University of Eastern Africa. The study sampled 8 members of the university pastoral council, the chaplain and students for interviews. The findings of the study showed that chaplaincy has a very crucial role to play in shaping and fostering transformative leadership in the university. Institutional mentoring and role modeling are among some of the outstanding activities that the chaplaincy engaged in borrowing from the Patristic thought. The paper recommends that chaplaincy be further strengthened to greatly contribute more in the wholistic education for transformative leadership. In addition, Patristic education should be taught to all students as a basis for leadership for future.

Key words: Chaplaincy, Education, Patristic Education, Leadership, Transformative Leadership

E2014-13 Mitigation Efforts of the Seventh Day Adventist Church Teachings to the Chebilat/Sotik Boarder 2007/8 Violence , Kenya

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Abstract:

This paper presents mitigation efforts of the Seventh-day Adventists to the Chebilat/Sotik boarder 2007/8 violence. The paper is an outcome of a study which was conducted whose major objective was to investigate the role of the Adventists in the mitigation efforts to the 2007/8 post election violence along the Chebilat/Sotik boarder. The area of study was Matutu District of SDA church, Borabu Subcounty. The researcher anchored his study on Aristotle's institutionalization theory of the natural law which states the importance of natural law in guiding the choices of the Christians. The study adopted descriptive survey study design. A sample size of 207 from a total population of 2070 was used. A questionnaire with a 5 point Likert type scale was used to collect data. The major findings of the study were; Seventh –day Adventists along Borabu /sotik border failed to abide by their known law and they also participated in the 2007/8 post election violence. Mechanisms of validating God's law were found wanting as well. There were also challenges of security, social reform, historical injustices, and negation of both Christian and secular values. This paper will be used by policy makers as a complimentary document to build a Kenya of love command and rule of law. The researcher recommends teaching of God's law which may lead to harmonious co-existence.

Key words: **Mitigation, Adventist Church Teachings, Violence.**

E2014-14 Determinants of Information Communication Technology Adoption for Teaching and Learning among Rural and Urban Early Childhood Development and Education Schools in Kisumu County

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Abstract

Teachers are perceived as a major category of human resource that facilitates the acquisition of requisite skills, knowledge and attitude necessary for the fulfillment of the aims and objectives of education. It is expected that if teachers are to become highly productive in their instructional duties, then they need to be motivated and be given opportunity for professional growth. The purpose of this study is to investigate the determinants of Information and Communication Technology (ICT) adoption for teaching and learning among rural and urban in ECDE schools in Kenya with particular focus on Kisumu County. The study aims to meet the following objectives: To examine aspects of teacher training for ICT adoption in teaching and learning in ECDE schools; To establish accessibility of ICT resources for teaching and learning in ECDE schools; To determine the attitude of teachers towards adoption of ICT in teaching and learning among ECDE schools; To establish teaching strategies that embrace ICT adoption in ECDE schools and; To assess the management systems for ICT adoption in ECDE schools. The study

population will be 2220 teachers of ECDE schools; 200 respondents will be drawn for the study. Questionnaire and interview schedule will be employed to collect data. The instruments will be pilot tested for determination of validity and reliability. Data will be analyzed both qualitatively and quantitatively. Qualitative data will be sorted, transcribed and categorized into themes and sub-themes and then reported in prose. Quantitative data will be coded and processed using SPSS computer package to generate frequencies and percentages. The results will be presented on tables and graphs. Comparison of level of adoption between urban and rural schools will be determined by Chi-Square computation. The study is hoped to establish the determinants of ICT adoption for its better implementation in teaching and learning in ECDE school.

Key words: Determinants , ICT , adoption, ECDE

E2014-15 Determinants of Sustained Use of E-Services in Public Universities: A Case of University of Nairobi

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Abstract

Over the last 2 decades, use of Information and communication technology (ICT) continues to grow rapidly and create ubiquitous opportunities for efficient and effective service delivery. The benefits of ICT adoption are evident in the literature and cannot be underestimated in any learning institutions. This study offers valuable insights on status and implications of limited ICT usage by universities. To examine factors determining use of e-services and how this affects user satisfaction, this study adopted a descriptive survey design with a use of a questionnaire that was administered face to face with 200 users at the University of Nairobi. The main aim was to explore the determinants of e-services use. Regression analysis was conducted to test the relationship of the identified variables. The results indicated that lack of stable wireless Internet connectivity, inadequate number of computers and inadequate user support are the major constraints. The results show how constraints of e-services play a crucial role in determining sustained uptake of e-services by users. Universities' management need to be aware that a non-satisfactory experience with said constraints can affect user satisfaction and sustained usage. If a student or staff has undesirable experience with e-service access or its inadequacy, then, such a user might develop a long-term negative perception and keep off subsequent usage. While this study was limited to a specific university setting, these findings, in part, are relevant to other universities particularly those characterized by large number of users and limited ICT resources.

Key words E-service, ICT, User

E2014-16 Devolving Early Childhood Development Education in Kenya: Policy Challenges and Opportunities

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Abstract

Early Childhood Development Education (ECDE) is the bedrock and foundation of all learning in the life of any child. There is a very close relationship between Early Childhood Education and schooling completion rates. It's said that a child who goes through ECD learning successfully has higher chances of successfully going through primary and secondary education. The importance of ECDE as key milestone in the development of a personality cannot be gainsaid. With the advent of the implementation of the Constitution of Kenya (2010), the devolution process heralded the devolution of pre-school among other devolved functions of the county governments. This paper is set to examine the policy and planning issues arising out of the devolution process. The paper will examine the national objectives of ECDE as a yardstick of implementation. The paper will then delve into the policy challenges of devolving ECDE to the county governments. The paper will also take a glimpse into the opportunities that have been carried with the devolution of ECDE services. The paper will seek to conclude that when the challenges bedeviling devolution of the ECDE sub-sector will be overcome, the opportunities touch on the betterment of almost all households in rural and urban Kenya.

Key Words: Devolution, Policy, Challenges, Opportunities, ECDE Objectives, Counties

E2014-17 Digitizing Teaching Methodologies in Kenya's University Education: the views of a Practicing Educator

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I am convinced that the portion of any education system is to pass knowledge and to ensure that students develop familiarity with the standards of thinking that surround their professional areas as efficiently as possible. The Kenya's, education system has come under very serious scrutiny from education experts. The Academia and the parents at large cry foul over the mediocre methodologies applied by the highest institutions of learning in Kenya. Experts have continued to call for an assessment of the education standards against national needs. Beyond the arising matter, I am more than convinced that the general concepts behind innovative teaching methods relevant. For instance, encouraging students through promoting interest toward the subject is a common principle applicable across all subjects. This paper therefore calls for an overhaul of the second-rate teaching methodologies and integration of the modern teaching approaches to learning. The Modern day teaching approach demands that teacher understands the information processing of their students. Consequently be in a position to know the 'stop time' and give their

students feedback. This approach is likely to yield the most productive student –teacher interaction available during law school. It is the task of the teacher to aid innovative teaching methodologies to break deadlocks and avoid gridlocks that might occur during the students' learning process. Consequently this paper advocates mini-lecture, innovative verbal teaching, simulation, and role-playing, out of class teaching and learning activities, the application of learning portfolio as an innovative assessment method which can reflect to the crucial among other proven to work Socratic teaching approach.

E2014-18 Disintegration in Value for the Child: The case of Parental Negligence in an Urban Setting.

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Abstract.

The paper seeks to examine whether disintegration of value for the child has bearing with increasing incidences of parental negligence of children in urban cities. Qualitative data from latest findings published were analyzed critically while focus groups in an urban area were employed to explore more information .A sample from the target population was selected for their views on parental value for children and its effects on care for the children. Information was tested and analyzed scientifically so that it can be representative of other urban areas in developing countries. The findings reveal a strong significant relationship between disintegration in value for the child and parental negligence and the study recommends the reawakening of the institution of fatherhood which seems to diminishing in value. Besides, certain institutions must be charged with the responsibility of advocacy and lobbying for the voiceless children. The rights of children must be repackaged as an item of major concern in the midst of the collapsing family. The constitution stipulates that children's rights must be safeguarded as a major gender issue yet what happens in reality does not meet the stated expectations. Parents must be put to task to enhance the provision of a conducive, basic and enabling environment for the nurturing of their children. Structures can be instituted to enable parents realize that there is worth in investing in the best possible foundation for the future of their children. The already existing ones can also be reviewed as to determine ways to revitalize them.

Key Words: Value for the child, family disintegration, parental negligence, children's rights, advocacy , lobbying , and fatherhood

E2014-19 The Role of the Church and Socioeconomic Development: Opportunities and challenges: Case of Africa Inland Church Kibera

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Abstract

Scholars are beginning to question the effectiveness of the church in carrying out socioeconomic development in the society. To many the church only seems to exist to connect humanity with the hereafter than the here, and day to day life. Therefore, it is not uncommon to hear comments like, "...the church is too removed, **Abstract** and distant from the practical life". Amazingly people forget very fast, the contributions and the legacy of the church and thus Christianity to development stands tall. For example,

- Christian missions schools up-to-date have continued to be centers of excellence
- Christian missions hospitals have been exemplary in giving quality healthcare management and disease preventive services to communities globally
- Most of the high performing NGOs are connected with Christianity or have been religiously inspired.

This study will investigate the factors that hinder the church in fulfilling its role in socioeconomic development. To facilitate that endeavour, the study will study Africa Inland Church, Kibera. This church begun very well to enhance socioeconomic development in Kibera slums, however, it has not been very effective. The study will adopt a survey design; using probability techniques, the church leadership will be sampled to arrive to a representative sample. The findings and conclusions to the study will be presented using tables and charts.

Key Words: church, development, participation, theology, socioeconomic, transformation.

E2014-20 Effects Of Proliferation of Public Secondary Schools on Quality Education in Teso North District

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Abstract

Education is regarded as one of the key catalysts to the achievement of the Millennium Development Goals by 2015. This study investigates the effects of proliferation of public secondary schools on quality education in Teso North District. The specific objectives of the study are to establish the factors leading to the rapid expansion of public secondary schools; to determine the effect of resource adequacy on provision of quality education and to establish the challenges encountered due to rapid expansion of public secondary schools in achievement of education quality. The study adopted a descriptive survey research design. The target population was 66 teachers, 25 head teachers and one DQASO. Descriptive and inferential statistics were used. Stratified, purposive and simple random sampling techniques were used. The study found out that increased interest in education and education awareness, bursaries from African Development Bank (ADB) and other financial institutions, subsidized free day secondary education, accessibility of education and political influence were some of the factors that led to proliferation of schools. Resource adequacy had a positive and insignificant effect on the quality of education. This meant that though these factors were present, they did not significantly boost quality of education. The challenges encountered due to the rapid expansion of public secondary schools were: lack of physical facilities and instructional materials; inadequate number of qualified teachers; over enrolment of students; inadequate motivation systems for teachers; lack

of cooperation between teachers & community; low student entry behavior; poor student attitude towards education and delay in releasing of government funds.

Key words: Effect, Proliferation, Quality Education

E2014-21 Encounter between the AGĪKŪYŪ and Christian Eschatological hope in the Context of HIV and Aids in Kenya

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Abstract

In this article an attempt is made to examine the encounter between the Agĭkŭyŭ and Christian eschatological hope. With the emergence of HIV and AIDS in Kenya, many communities have confronted reality of the pandemic not as a theoretical principle but as a threatening existential reality. Of concern to the pastoral care givers, is a situation in which some of the People Living with HIV and AIDS (PLWHA) die with no children of their own. By employing a pastoral hermeneutical approach to interpret theological and cultural concepts, their meanings within the Agĭkŭyŭ spirituality is assessed. It is argued in the article that their deaths sadden the whole community because dying without children of one's own is interpreted as a gesture of exclusion from the communion of ancestors, and realising that they will never be venerated by the next generation now becomes an existential and pathological threat to them. Unlike the Christian understanding of eschatology, Agĭkŭyŭ eschatology sees the universe as that which consists of two aspects, the visible and the invisible (or the physical and the spiritual) and, in their world-view, the duration is seen as continuous with no break in actual events here and now. The community notion of eschatology is that when they die they would be remembered through the visible inheritance that their descendants would receive from them and by naming their children after them. It is suggested that there is need for the pastoral care givers dealing with the PLWHA in their last stage of life to consider exploring both Agĭkŭyŭ eschatology and Christian eschatology. To this end, the understanding of the Christian eschatology can play a decisive role to the PLWHA, who are dying unmarried or young, for it offers them the hope of new life beyond death.

Key words: Ancestor, HIV and AIDS, Pathology, Eschatology, PLWHA, Pandemic

E2014-22 Effects of Communication and Leadership Styles on Information Flow in Public Universities in Kenya; A Case of Maasai Mara University

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Abstract

This research was carried out to determine the effects of communication and leadership styles on information flow in public universities in Kenya my case being Maasai Mara University. The objectives were to find out the channels through which information reaches the staff within the university, to indentify the methods of communicating to students on matters affecting them directly, to determine the leadership styles in use at Maasai Mara University. Questionnaires were used to collect data from the various target population, analyze and present the findings.

The findings show that communication is key in leadership in the sense that it influences it a lot and for there to appropriate leadership style, communication is essential. Information flow in Maasai Mara University is mostly downward in the sense that the top management does not give chance to the people ranked lowest in hierarchy to air their views that is through the decision making process. Most universities in Kenya tend to use autocratic or authoritarian type of style especially on students at the expense of their rights. This has frequently led to rampage among university students.

E2014-23 Health Education and responses by the education system to HIV and AIDS prevention and management among Institutions of Higher learning in Kenya

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Abstract

It is estimated that approximately 1,192,000 Kenyans are living with HIV (KAIS 2012) Majority of the new infections in developing countries are shown to be occurring among the age group 15 – 24 years. Universities are reported to constitute a potentially fertile breeding ground for HIV (Katahoire, 2004). Therefore, urgent steps need to be taken to ensure that Kenya's future educated and skilled personnel are not severely compromised. The objective of this study therefore is to find out the role of education and the responses by the education system to health education and HIV prevention and management. Further it will seek to find out if the Education system curricula are aligned to the National AIDS Strategic Plan as well as seek to assess the effectiveness of the interventions put in place in these institutions to respond to HIV. The methodology employed will be quantitative survey where questionnaires will be distributed among students in two chartered universities, one public and private. Self-administered questionnaires will be given to a hundred students attending the University common unit in HIV studies in the respective universities'. Data will be analyzed using SPSS. It is hoped that the findings will identify gaps in the responses and will be beneficial to the two Universities and the education sector in assessing the effectiveness of their HIV policy and programmatic responses. Recommendations will be given based on the findings of the study.

Key words: HIV Statistics in Kenya, Education sector responses to HIV, Young people and HIV, National AIDS Strategic Plan

E2014-25 Influence of Facebook Usage on Psychological Adjustment of University Students in Kenya

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Abstract

For many students, joining university presents their first experience of life free of parental control. Their psychological ability to manage this transition milestone is an important factor in psychological adjustment. Students turn to Facebook for psychosocial interactions. Referent literature reveals inconsistent findings in research on Facebook usage and psychological adjustment. This study sought to establish the influence of Facebook usage on psychological adjustment of undergraduate students in Kenyan Universities. The indicators of psychological adjustment for this study were self esteem and loneliness. Self-esteem was operationalised by means of the Rosenberg Self-Esteem Scale. Loneliness was measured using the UCLA Loneliness Scale and Facebook usage patterns were determined by means of Facebook Intensity Scale (FIS). The three scales were combined into one questionnaire that included students' demographic characteristics. The data collection tool yielded a Cronbach's alpha correlation coefficient of 0.74 which was deemed sufficient for the purposes of research. *Ex post facto* cross sectional design was used and research conducted among universities within Nakuru County. A stratified random samples of 4 universities and 327 respondents with 91.7% response rate. Those who had active Facebook account were 98.3% of the sample. The mean age of the respondents was 21.6 years where 53.7% were female and 46.3% male. Data collected was analyzed using SPSS version 22.0. Psychological adjustment negatively correlated with Facebook usage but positively correlated with self-regulation. These findings could help student counselors in development of counseling programs aimed at helping students with psycho-social integration, time management and psychological adjustment on campus. The findings could also be beneficial to ICT departments as well as inform policy formulation on internet regulation on campus.

Key words: *Facebook, usage, psychological adjustment*

E2014-26 Integrating Technology in the Language Classroom: A Revolutionary Approach

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Abstract

The integration of technology in classroom teaching and learning is one of the most popular issues in education today. Attempts at this integration often emphasize technology infrastructure. However, research has shown that mere availability of technological equipment does not imply the successful use and integration in the classroom. There are various factors that influence the integration of technology in the classroom. These include the teachers' training and hence

knowledge, skills and beliefs, the school culture, the curriculum, evaluation and assessment methods, education policies and most importantly, the existing pedagogical approaches. This study therefore focused on learning how technology, specifically the computer, can be innovatively integrated in teaching listening and speaking skills in language. The study adopts multiple data collection methods including observation, interviews, the nominal group technique and learner reflections. The study reveals that as a strategy for teaching, technology can function both as a tool and as an exploratory environment. In this way, it simultaneously appeals to students' visual and audio senses, enhances a constructivist classroom environment, and provides immediate feedback which fosters learner self-monitoring. Availability of resources not withstanding, teachers' technology skills, exposure, interest and openness to change, the compatibility of the teaching approach with the technology, the nature of the technology, the school culture, the flexibility of the classroom and school schedule are paramount in the successful integration of technology in teaching and learning.

Key words: integration, technology, innovative

E2014-27 Role of a Prophetic Church in the Context of Poverty in Africa

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Abstract

In this article the role of a prophetic church in the context of poverty in Africa is examined. It is argued that even though Africa receive huge resources from Western donors as a way of poverty alleviation, absolute poverty still persists on a mass scale. In the article the misuse of power, bad politics, pseudo-democracies, authoritarianism and corruption are identified as obstacles to poverty alleviation in Africa. It is asserted that this is a betrayal which is championed by the powerful and privileged minority political elites who hinder development. It is suggested that the church in her prophetic role can engage in advocacy. To this end the understanding of democratic principles is vital and the church as a community of faith is seen as a tool that can play a decisive role in empowering and mobilizing the people to become agents of their own development thereby liberating themselves from these dehumanizing socio-economic and dysfunctional structures that also devalue their human dignity and freedom.

Key words: Poverty, democracy, church, development, empowerment.

E2014-28 The Role of ICT in Education: ICT, a Propeller Of Education To Greater Heights

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Abstract

The twenty first century has been marked as the digital century; this century has been so synonymous with ICT. The impact of ICT on almost every aspect of life in this century and particularly in the past few decades cannot be wished away. With the passing of time, it's becoming apparent that ICT skills are becoming fundamental to life as basic reading and writing is. In education, it is becoming clear to us, that apart from having good teachers, good teacher-student ratios and good classrooms and other infrastructure, ICT has an extremely positive impact on the sector albeit with a few negative challenges. This paper discusses how the use of ICT and ICT tools can impact on the education sector from primary level up to university in a positive way. It also looks into what the use of ICT in education is promising in the near future with the government thinking of investing heavily on ICT from as early as primary school.

Keywords: Digital century, ICT, ICT tools.

E2014-29 The Role of ICT in Education in the growth of Education

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Abstract

The twenty first century has been marked as the digital century; this century has been so synonymous with ICT. The impact of ICT on almost every aspect of life in this century and particularly in the past few decades cannot be wished away. With the passing of time, it's becoming apparent that ICT skills are becoming fundamental to life as basic reading and writing is. In education, it is becoming clear to us, that apart from having good teachers, good teacher-student ratios and good classrooms and other infrastructure, ICT has an extremely positive impact on the sector albeit with a few negative challenges. This paper discusses how the use of ICT and ICT tools can impact on the education sector from primary level up to university in a positive way. It also looks into what the use of ICT in education is promising in the near future with the government thinking of investing heavily on ICT from as early as primary school.

Keywords: Digital century, ICT, ICT tools.

E2014-30 Effectiveness of Mass Media in Youth Education Programmes Concerning the Use of Contraceptives: A Case of University Students in Nairobi

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Abstract

The study investigated the effectiveness of mass media in disseminating information concerning the use of contraceptives to the youth in Kenya. The focus was on university students in the country. The main objective for the study was to investigate the effectiveness of mass media in

educating youths on the choices and use of contraceptives that are available to them. Youth are the backbone of any economy, there is need to examine the role played by the media in educating the youth about the importance and access of contraceptives in their sex life. The study was guided by the socialization theory of media. The socialization function of media observes that media helps people to know what is expected of them and how to fit in society. Both Print and electronic media send signals about sexuality and its place in society among the youth. The study was undertaken in Nairobi city. It adopted a descriptive survey design. The target population was university students in the city. A sample of 400 respondents aged 18 years and above was selected through stratified sampling and simple random sampling derived from public and private Universities in Nairobi county. The data was collected through questionnaires. Data analysis encompassed descriptive statistical methods. The study revealed that media played a big role in informing youths about the various contraceptives and there is a relationship between access to media and the choice and use of contraceptives among youths. The study is important such that it yields data and information on the direct link between media campaigns on contraceptives and the use of contraception among youths in Kenya. The study recommends that mass media should be more proactive in disseminating messages that encourage behavior change among youths among that the use of contraceptives.

Key words: Mass media, socialization, Youth, Contraceptives

E2014-31 Using Unmodified Real Things in Teaching Sciences as Innovative and Creative Method in Educational System

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Abstract

Teaching is a noble profession which needs a practical approach to concepts being taught in the classroom. Therefore, as the teacher presents a topic, in a lesson and demonstrates on the concept, unmodified real things is very important for the learners' comprehension and retention of the facts. Unmodified real things refer to using real things as they are, unaltered only sometimes when they have been removed from their original real life environments. All their parts are intact, size and can function on being alive, for example algae, frog, butterfly and so on. The problem is nowadays teachers do not use unmodified real things in teaching sciences (Biology, Chemistry, and Physics) and leads to poor retention of concepts and facts taught. Some learners also are from some regions where such things are uncommon. The main objective was to investigate why teachers are not using unmodified real things in teaching biology in secondary schools. Survey method was used through questionnaires to collect data from teachers of sciences in secondary schools in Lodwar town, Turkana County. Data was analyzed and presented in graphs and tables. The findings will be important to the learners because unmodified real things is advantageous as learners become familiar with objects in their surrounding and also learners will benefit by observing them alive, manipulate and use them to discover their characteristics, their operations, actions or their behaviors. It is concluded that learners in sciences need this creative and innovative method for the purpose of high retention

and comprehension of what is taught in the classroom. So the research recommends science teachers to use the method regularly.

Key words: Unmodified; Real; Creative; Innovative; Sciences

E2014-32 Role of Information Technology in Education Advancement in Kenya

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Abstract

Kenya, through Vision 2030 recognizes ICT as key for a knowledgeable economy. While ICT continues to advance in the western countries, a larger percentage of 3rd world countries such as Kenya, still experience a lag in its implementation, and that continues to widen the digital and knowledge divides despite the Government's objective to ensure that the country has a competitive telecommunications industry that delivers reliable and affordable services and products for the education and social benefit of citizens. This article provides an insight into the state of educational development in Africa and the role of information technology in narrowing the knowledge divide. It documents the progress made in educational development, while revealing the challenges faced. The article provides an overview of the integral and symbiotic interface between education development and information technology. While the context is local, the strategies discussed are applicable to other African countries with similar challenges.

Keywords: Education advancement in Kenya, ICT and education, ICT integration in education

E2014-34 Western Education on the Changing roles of Women: The Case of Idakho Community, Kenya

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Abstract

This paper examined the contribution of western education as provided by Christian missionaries on the changing roles of Idakho women. The spread of Christianity and western education in Idakho had a broad approach to reinforce evangelization and to win converts. Education thus, became part of the new value system less identified with transmitting Christian values and belief and more with providing access to new occupational and social status. The colonial authority further introduced hut taxes and cash economy. Thus, the colonial economy forced men in Idakho to seek employment in European economic ventures and took them away from the labour responsibilities they used to have in the traditional economy. With frequent absence of men, who left their villages to seek paid employment in urban area or settler's farms, the decline of traditional institutions and uncertainty arising from changes in society, more and more women joined the church in search of new vision of the world as well reassurance. Women who went to school initiated the beginning of a wage earning class of women among the Idakho and it

reflected the widening transformative impact of Christianity and its agencies. Methodology for this study involved data collection from secondary sources and primary data derived from field research. Moreover, the early success of education and other program like health led to the liberation of women who became agents of transforming Idakho society.

Key Words: Christianity, Education, Idakho, Socio- economic and Women.

E2014-35 Managing the Post-Disaster Trauma; Effects and Experiences in Kenya

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Abstract

Kenya has been victim of many disasters associated with traumatic experiences such as constant terrorist attacks and water and fire tragedies as was with the 1998 American Embassy Bomb blast, the Likoni Ferry tragedy, the Sachangwan oil tanker tragedy in Nakuru, the Westgate Mall attack and the Likoni church attack. These disasters have a tendency to result into traumatic experiences to those involved and affected. Generally, trauma results when one experiences excessive stress that overwhelm their emotional or physical ability to cope with a situation as is the case with most of these Kenyan cases. While emotional trauma can result in the absence of any physical injuries, many times the two go hand in hand. Relying on the examination of existing literature, the paper tries to answer the objective questions of understanding the effects of post disaster trauma to the affected Kenyans and highlighting the experiences in detail alongside the challenges experienced by the country's disaster management agencies. It is highlighted that Kenya faces logistical challenges in handling post disaster trauma based on the limited capacity of the Government and various agencies. Follow up activities to those affected are hardly done and the various agencies activities overlap in some cases and fail to realize effectiveness in handling trauma. The effects under review and discussion include post traumatic stress disorder, paranoia and physical disability. The paper explores how these effects are manifested both to the victims and the society at large within the Kenyan context and proposes how these can be minimized or at best eliminated. The paper recommends that the Government of Kenya should develop a policy on how to help the victims of trauma since disasters are inevitable, and also to enhance the capacity of existing agencies towards the handling of trauma by strengthening the existing psychiatric units major medical facilities with the necessary staffing.

E2014-36 Mapping out the level of integration of ICT in teaching of Science

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There has been increased interest in ICT integration in all spheres of life, education included. A lot has been studied and written about how ICT integration may change the teaching and learning of Science from the traditional teacher-centred to a more learner-centred pedagogy. This study set out to explore the level of integration of ICT in the teaching and learning of Science in secondary schools in a County in Kenya. The study used a quantitative approach with a teacher questionnaire as the data collection tool. Findings from this study suggest that most teachers are well equipped with basic knowledge of ICT, which is 'basic education' according to the Kozma ladder of ICT skills. For example, 80.6% of the teachers reported that they can use email and could file e-documents. However, most of these teachers have not embraced the integrative use of ICT into Science teaching and learning, with only 27.7% reporting that they were able to identify learning situations and topics that require use of ICT. Teachers also reported that lack of ICT infrastructure (57.0 %), lack of time to prepare (54.7%) for ICT lessons and low learners' ICT skills (61.6% of respondents) as the main obstacles to using ICT. This study recommends that continuous professional development of teachers on Technological Pedagogical Content Knowledge (TPCK) is necessary to equip teachers with knowledge and skills on integrative use of ICT. Education stakeholders- both public and private- should merge efforts and supply enough ICT infrastructures to schools. Schools also need to start programmes to equip learners with ICT skills.

Key words: ICT integration, ICT knowledge and skills, strategies, obstacles

E2014-37 Impact of Media Ethics on the Practice of Journalism in Kenya

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Abstract

Media in Kenya just like elsewhere in the world, operates on the basis of trust. Being a conveyor of information and news, the readers and viewers must believe that what they are hearing, reading and seeing is nothing but the real truth. In this case therefore, publishers, editors and reporters must uphold the highest standards of professional ethics and conduct. A media industry that operates with unreliable dishonest will always lose its credibility from its audience.

The study analyses historical factors as to why and how press freedom in Kenya has grown. The relationship between the media practitioners and the establishment that has grown to the modern level compared to the past periods of time. There were conflicts between the press and government officials because of suspicion and hostility that the two has for the other. Some of the specific factors which however had the less friendly relationships between the two included; poverty, corruption, tribalism and political polarization amongst the Kenyan populace. An attempt has been made here to show that the hostile relationship between the media and government officials was not accidental. That it, in fact is part and parcel of the culture which has developed in the Kenyan society. The research study is aimed at recognition by journalists, the establishment and the society at large what our new Constitution says in so far as "Democratization" of Kenya is concern and that press freedom must be tackled and offered squarely. Journalists and other practitioners are bound worldwide by Code of Regulations.

Key Words: Credibility, Confidence, suspicion and hostility, political polarization, Code of Regulations, New Constitution, Media practitioners

E2014-39 Navigating the Challenges of Menstruation and Schooling among Adolescent Girls Living in Informal Settlements in Kenya

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Abstract

In Kenya, there have been on-going campaigns and subsequent provision of sanitary towels to adolescent girls in urban informal settlements and among some marginalized communities as part of the efforts to ensure equitable access to education among females in poor neighborhoods. Its main focus was to examine adolescent girls' experiences in communicating their menstruation-related concerns, such as the need for sanitary towels and medication, specifically the need for permission to visit the wash rooms to change their sanitary towels during unexpected onset of menstruation at school. The study adopted a phenomenological approach to explore the meanings and interpretations of menstruation from the point of view of 22 adolescent girls aged between 15 and 17 years over a six-month period. The study explored the adolescent girls' own experiences of menstruation through journaling, body mapping, focus group discussions and individual interviews. In classroom situations, adolescent girls often found it difficult to discuss issues relating to menstruation, especially with their male teachers. It was therefore argued that provision of sanitary towels is not sufficient in addressing issues related to menstruation among adolescent girls. To assist the girls manage menstruation effectively, there is also need to create a supportive environment by working with the communities to de-stigmatize menstruation and to sensitize teachers, parents and males about the need to offer support to girls undergoing menstruation, as well as giving a voice to the girls to speak out their concerns.

Keywords: Navigating Menstruation, Schooling, Adolescent Girls

E2014-40 Perception of youth towards the youth-friendly health services: A case study of Mt Elgon Sub-County Hospital

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Abstract

The youth form 63 per cent of the population in Kenya. They have unique needs that must be addressed to promote social, economic and political progress. For Kenyan young people and for

young people worldwide, the critical transition from childhood to young adulthood is delicate and challenging and is dependent on support and guidance from the family, community, school, and society at large. Adolescence is also a period in which critical life altering actions are taken and decisions are made. Hence the youth need information, services, and support to prevent unplanned pregnancies, unsafe abortions, HIV/AIDS and sexually transmitted infections (STIs).The youth in Mt Elgon face myriad health problems like HIV/AIDS, STIs, early pregnancies, early/forced marriages, gender-based violence, sexual abuse, drug abuse and poor access to health services. The study used the survey research approach to explore the perception of the youth towards the youth-friendly services offered at Mt Elgon Sub-County Hospital and Kaptama Hospitals. The target population was the youth aged between 13-17 years and the health workers in these hospitals. The study revealed that there is a gap in health training since the health workers lack the skills and attitudes needed to manage youth problems like rape, early pregnancies and HIV/AIDS. The study further revealed that the youth do not seek health services in addition to not having access to family planning services, brochures and life skills training. Youth-youth programmes are inexistent hence most youth do not understand sex education and their rights as youth. There was need for brochures to enable the youth understand their sexuality. There was need for the youth to be given access to family planning and life skills training. The study further revealed that the cultural fabric in the community was disintegrating hence the need for dialogue between the youth and the elderly community to restore the cultural fabric of the community.

Key words

Health, Youth-friendly services, Mt Elgon, Sub-County Hospital

E2014-41 Post-Traumatic Stress Disorder among Children Survivors of 2007/2008 Post-Election Violence in Nakuru County

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Abstract

Recent advances in psychological research indicate that traumatic events can have effects on the victims, perpetrators and those who witness them. This is on the premise that no one who experiences a disaster is untouched by it. In the 2007/2008 post-election violence in Kenya, children were exposed to and witnessed various traumatic events. Some may have developed behavioral and anxiety disorders. The study sought to assess levels PTSD severity among the children. The study was guided by Cognitive Behavioral Theory. A sample size of 460 respondents was derived from 10 divisions in Nakuru County which were hard hit by post-election violence. The sample comprised of 400 children who included primary and secondary survivors of the violence and 20 deputy head teachers in the schools sampled and 40parents who took part in focused group discussions. Ex-post facto research design was utilized and multi-stage sampling approach was used to derive the sample. Data for the study was obtained using questionnaires, interview schedules and Focused Group Discussions. A pilot study was conducted in Subukia division involving 80 children, four deputy head teachers and two focused group discussions. The hypotheses were tested at significance level of 0.05.The study found high

PTSD levels children survivors of post election violence. This study recommended psychological debriefing and trauma counseling as interventions needed for the survivors. The findings of this study provide useful information which can assist parents, teachers and policy makers to put appropriate interventions for support.

Key words: Post-Traumatic Stress disorder, post-election violence of 2007/2008 and children survivors

E2014-42 Prevalence of ‘Best Practices’ strategies of Educational Supervision on Effectiveness of teaching in Primary and Secondary Schools in Nyandarua County, Kenya

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Abstract

Researchers in educational supervision have studied many aspects of supervision, purposes, outcomes and challenges of supervision. The study was conducted March 2014 to establish the applicability of ‘best practices’ identified by a group of classical theorists as strong leadership, a clear school mission, preventing school violence, a safe and orderly climate, monitoring student progress and high expectations. The participants were principals, deputy principals, senior teachers, heads of departments, class teachers, and other teachers. The variables explored four broad areas within which the context of application of ‘best practices’ was expected. They were; school wide system, school wide expectations, and enabling environment and anticipated outcomes. Data was collected using questionnaire and interview guide and analyzed using Statistical Package for the Social Sciences (SPSS) and descriptive narratives. Standard research ethics were observed. Majority participants (78%, 84%, 78% and 70% respectively) indicated that best practices were in use in their schools according to yes/no scales used. Based on the findings, it was concluded that there existed a divergence of opinions between teachers and educational administrators regarding the best practices. It was recommended that regular consultative meetings be held between teachers and school principals on how to provide the best school climate for best teaching and learning. The key words: School-Wide Behavior System, School Connectedness, Positive Relationships, Positive Climate.

E2014-43 Psychosocial Effects of Palliative Care-Giving on Primary Care-Givers of Elderly People with Advanced Cancers in Manyatta Constituency, Embu County, Kenya

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Abstract

Global statistics showed that people providing primary palliative care to cancer victims encountered different challenges ranging from fear of impending death, economic, social, stigma, loss of function or place in the society, emotional burn-out among others, all of which impact negatively on their emotional wellbeing. The purpose of the study was to investigate psychosocial effects of palliative care-giving on primary palliative care-givers (PPCs) attending elderly people with advanced cancers in Manyatta constituency, Embu County. The study was informed by two theories; Social Role Theory and Transactional Stress Model. The study used descriptive research design to capture subjective feelings of the respondents. A sample was drawn using purposeful and stratified random sampling techniques to get a unique but representative sample of 30 respondents from all administrative divisions in the Constituency. The data was collected using questionnaires and analyzed using descriptive statistics. Data was presented in tables in form of frequency distributions and percentages. The study's findings indicated that majority of the respondents were spouses and daughters of the patients. Psychosocial needs of respondents were financial, training, counseling and social support from other stakeholders. The care-giving roles were found to be demanding and exhausting causing isolation, anxiety, hostility and hopelessness among respondents. The findings helped to identify appropriate interventions strategies that could help to mitigate the psychosocial effects of palliative care-giving on PPC. The researcher recommended social support; counseling and basic care-giving training to be provided to PPC(s) on a regular basis to support them. The knowledge gained from this research may be helpful in designing guidelines for the formulation of appropriate counseling interventions by the Ministry of Health, Hospices, Policy makers, Counselors and other stakeholders working with cancer terminally ill people.

Key Words *Psychosocial, palliative care, family, terminal care, advanced cancers, primary palliative care-givers, elderly persons, family, malignancy, and aging.*

E2014-44 Revamping Critical Thinking Aspect as the Operation Principle in education for Creativity and Innovation towards vision 2030

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Abstract

Many signs now indicate the urgent need to revamp the critical thinking aspect together with technological readiness now being implementation as the operation principle towards creativity and innovation in education for realization of the nation's vision 2030. Education is aimed at reducing the thinking barriers and targeted or critical thinking as the mode of operation will facilitate processing of new information building blocks for Vision 2030. The research adopted John Dewey theory of education which integrates the school with the society, and the process of learning with the actual problems of life by a through going application of the principles and

practices of democracy. The research adopted the descriptive survey research design. Educational institutions from kindergarten to universities within Nakuru County were sampled using stratification and then simple random sampling. Open ended questionnaires and interview schedules were used to collect data which was analyzed using descriptive and inferential statistics with the use of SPSS version 20. The key findings; there are frequent curriculum reviews including processes and techniques used by education experts to communicate information and the cultivation of intrinsic motivation to implement the information; this is slowly revolutionizing the aim of education to be practical by making students feel like apprentices who should rely on the human good will and faith in his ability to solve the nation's social, economic and political challenges. This article recommends full implementation of critical thinking sense as the operation principle in education for creativity and innovation for developing both the intellectualism as well as the patriotism.

Key words; Revamp, Critical thinking sense, Creativity and Innovation, Education, Vision 2030,

E2014-45 Relationship Between Teachers' Job Satisfaction and Academic Performance in High and Low Performing Secondary Schools in Rachuonyo North District, Kenya.

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Abstract

The study analyzed teachers' job satisfaction and academic performance in high and low performing secondary schools in Rachuonyo North district. The purpose of the study was to establish teachers' job satisfaction and academic performance in high and low performing secondary schools in the district. The study adopted descriptive survey and correlation research designs. The target population was 200 teachers and school principals. A sample of 80 form IV teachers and 20 principals of high performing schools, 58 form IV teachers and 20 principals of low performing schools were used in the study. Questionnaires and interview schedules were used to collect the data. Validity and reliability of the instruments were established through expert opinion and Cronbach reliability test respectively. Data was analyzed using descriptive and inferential statistics. The study established that teachers' job satisfaction was low. There was no significant relationship between job satisfaction and academic performance among teachers' of high and low performing schools in Rachuonyo district. The study recommended that Salary and allowances have been found to be the major reasons for job dissatisfaction among secondary school teachers in the district. The Ministry of Education should review teachers' salary upward to meet the modern day scale. The findings of this study are significant to the Ministry of Education, personnel involved in decision making, policy formulation and implementation towards realizing the vision 2030 in education sector.

Keywords: *comparison of teachers' job satisfaction in high and low performing schools, Academic performance, teachers, KCSE examinations, high and low performing secondary schools.*

E2014-47 Role of Television in Alcohol Use among the Youth

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Abstract

Alcohol advertisements that feature on Kenyan television are not only very catchy but also quite entertaining. These advertisements are particularly attractive to the youth. Alcohol is one of the drugs that is addictive and has devastating consequences on the lives of the youth as well as that of others in society. This paper seeks to examine the impact of these images on persuading youth to engage in the use of alcohol products. It seeks to establish the attitude of youth towards the alcohol messages depicted on television. The study is based on Albert Bandura's theory of social learning that discusses behavior by direct experience or observation. Diffusion of innovation theory that discusses how ideas, forms of behaviour are spread within a population is also used. The study was based on five selected public day secondary schools within Eldoret Municipality. The target population was young people aged between fourteen and seventeen years. A sample size of 260 was arrived at through simple random and purposive sampling. The data is presented using both descriptive and inferential statistics. The paper reports that young people consider alcohol adverts attractive in their early teens and are vulnerable to being influenced. However, the other factors in their lives will determine whether they will engage in alcohol use.

Key Words: Alcohol, Youth, Television, Influence.

E2014-48 What Percent of Variance in Teacher Professional Commitment can be attributed to School Leadership and Teaching Experience? A Multilevel Analysis Approach

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Abstract

The purpose of this study was to investigate whether professional commitment (PC) is related to school leadership (SL) and teaching experience (TE). Specifically, the purpose was guided by two research questions: (1) Are there differences in professional commitment scores among teachers and administrators of elementary and secondary schools in Kericho County, Kenya? (2) Does school leadership explain the differences in mean school professional commitment scores?

A sample of 1,600 elementary and secondary school teachers and administrators were surveyed. Data were collected using individual instrument packets distributed to participants within each of the 70 schools in seven school divisions. The district education office (DEO) personnel administered the survey, explained the purpose of the study, assured participants of anonymity, encouraged participation, and left while participants completed the questionnaire. All completed packets were sealed in envelopes and collected by designated DEO personnel. Complete and useable surveys came from 537 teachers and administrators, yielding an overall response rate of 33.6%. This study used hierarchical linear modeling (HLM) approach to investigate relationships between SL, PC and TE with a sample of 537 participants. The HLM results indicate significant differences among schools ($\chi^2(66) = 227.68, p < 0.001$), with an intra-class correlation of 0.2738 indicating that 27.38% of variance in professional commitment was among schools. When school leadership was used as a level 2 predictor with no level 1 predictors, the school variability dropped from 2.15677 to 1.59552 indicating that 26% of variance in school professional commitment was due to school leadership ($\chi^2(65) = 187.02, p < 0.001$). Further, the reliability of the sample means in any school for the true mean school professional commitment was 0.696.

Keywords: Professional commitment, school leadership and change, teacher experience

E2014-49 A Multilevel Approach to Investigating the Achievement Gap of Students in Single-Sex Schools with Students in Coeducational Schools

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Abstract

The purpose of this study is three-fold and involves investigating whether students in: a) gender specific schools perform better than those students in coeducational (mixed) schools on achievement scores; b) the boy only schools perform better than students in the girl only schools; and c) single-sex schooling in a district, county or national school and across 14 administrative counties in Rift Valley differ in academic achievement when compared to students in coeducation (mixed) schools. This study used hierarchical linear modeling (HLM) approach to address the above research questions with a sample of 57,041 students in 996 secondary schools in the 14 counties of Rift Valley. The HLM results indicate significant differences among schools ($\chi^2(995) = 53,252.11, p < 0.001$), with an intra-class correlation of 0.4558 indicating that 45.58% of variance in student achievement was among schools. There were no level 1 predictors included in the model. When single-sex school status was used as a level 2 predictor the school mean achievement variance dropped from 1.84349 to 1.51200 indicating that 18% of variance in school achievement was due to single-sex school status ($\chi^2(994) = 40,739.94, p < 0.001$). The reliability of the sample means in any school for the true mean student achievement was 0.962.

Further, results showed that students in single-sex schools achieved at a significantly higher level than those in co-educational schools. The study concluded with a discussion of the importance of the study findings with a call for the education leaders to be fully involved in providing the kinds of educational experiences that promote student learning and a relook at structure school classifications into district, county or national.

Key words: achievement, single-sex schools, coeducation schools, mixed schools, district schools, provincial schools

E2014-50 Causes of slaying of Elderly People in Kilifi County from 2002-2014

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Abstract

This paper aims to establish the underlying causes of the significant insecurity affecting elderly people in Kilifi County of Coastal Kenya, and to examine the role religion is playing in making sure the problem is positively addressed. From 2002 onwards, Kilifi County has experienced the slaying of senior citizens; some even being branded as witches (*atsai/mutsai*) and regarded somehow as a threat to the community. For over a decade now, elderly people in Kilifi County have lived under this fear for they are not sure of what shall befall them next. The recent case was that of Katana Kalulu, a senior religious specialist (Midzi-Chenda Kaya elder) who was gunned down in his home (at Jimba Watamu) on 16th January 2014 whilst listening to the evening news outside his house. Kilifi County dominantly practices three religions: Islam, Christianity and the Indigenous religion of the Midzi-Chenda (*Chik'wehu*) community. The people have formed an inter-faith institution- the *Coast Interfaith Clerics' Council* (CICC) that focuses on addressing important issues of human society with a common voice. The present paper focuses on the role of religion in this society with particular reference to the CICC as a religious institution attempting to ensure that human rights are respected - particularly for the elderly people in Kilifi County. The research conducted for this study uses standard tools such as interviews, focus groups and questionnaires in collecting data, but also documentary reports from community administrators such as chiefs and police departments. The output is expected to assist in addressing the crisis through religion because of its influence in society.

Key words: Religion in society, human rights, interfaith relations.

E2014-51 Social Exclusion, Class attendance and availability of counseling Services to Orphans in Secondary Schools in Kenya

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Abstract

Orphan-hood can be a source of both physical and psychological trauma in children. Apart from being excluded by family members and friends, orphans are likely to miss classes and hence may require consistent guidance and counseling to help them come in terms with the new life they find themselves in. This paper outlines studies that were done in Bondo and Bungoma North Districts in Kenya respectively to investigate social exclusion, class attendance and availability of guidance. The two studies were done independently between 2009 and 2011 using survey designs among students in secondary schools. The research population comprised of form 1 and 2 students in the 46 public secondary schools in the two districts. A sample of 695 respondents (408 orphans and 287 non-orphans participated in the study. Simple random sampling technique was used to select the participants. A questionnaire was used to collect data. Both descriptive and inferential statistics were used in data analysis. Findings revealed significant difference in social exclusion and class attendance between orphans and non-orphans indicating that the orphans are more socially excluded and are more likely to be absent from school than non-orphans. It was further noted that there was no difference in access to guidance and counseling services by both orphans and non-orphans. It was concluded orphan-hood status is likely to lead to exclusion of children from mainstream community activities and make them not able to attend classes hence influencing their academic performance. The stakeholders in education might use the findings in this study as a basis for enhancing Guidance and Counseling Programs in secondary schools to enable students cope with psychological problems.

Key words: social exclusion, guidance and counseling and class attendance.

E2014-52 Status ICT Education Policy Implementation in Secondary and Primary Schools In Kenya

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Abstract

Kenya, like most developing countries, faces challenges in achieving the Millennium Development Goals and the Vision 2030. In order to widen access to quality education, Kenya has tried to come up with policies and strategies in a bid to harness the role of technology towards building knowledge based economy. The earliest attempt at ICT policy formulation in Kenya dates back to the 1980s, but the process remained incomplete by 2000 (Nduati & Bowman, 2005). The application of Information and Communication Technology (ICT) in both primary and secondary schools is perceived as a means for transforming teaching and learning processes, and has been met with significant enthusiasm. Further, Kenya as a country also perceives ICT as a tool that will promote socioeconomic, political, and sustainable development. Hakkarainen et. al. (2000) points out that ICT is a transformative tool and its full integration into the school systems is necessary to prepare students for the information society they will inherit. This paper explains the existing ICT policy in education in relationship to the Millennium Development Goals and the Vision 2030. It further focuses on how far we are as country in implementing the existing ICT policy. The paper highlights the challenges facing the implementations of the ICT policy and suggests ways to overcome the challenges.

Key words; ICTs in education, ICT policy, Challenges

E2014-53 The Challenges of Women Administrators on the Management of Schools: A Case Study of Female Head teachers in Mbale District

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Abstract

The need for perception of women administrators on leadership challenges they face is significant to ensure sensitivity to adolescent girls who wish to pursue leadership of schools in Uganda. Many times, women have been marginalized and their contributions in schools have not been recognized. Consequently, there are few female head teachers in Government Grant-Aided primary schools in Uganda. These minimal numbers of women in decision making positions make Africa lose human resource. It is against this background that this study attempted to critically explore the challenges that women head teachers of Government Grant-Aided primary schools face in the administration of the schools. The study was guided by the general question 'What are the perceptions of women administrators on the management challenges they face in Government Grant-Aided primary schools in Uganda? The Descriptive Survey Research Design was used in the study. The study population was 15 female head teachers of primary schools. Purposive technique was used to select respondents. The study utilized interviews, questionnaires and document analysis to collect data. Data was analyzed using descriptive analysis, mean and frequencies. The researcher anticipates that the findings of the study will fill the gaps in literature, provide a voice for female head teachers, provide more insights for further researches, highlight some of the strengths of women leadership that should be acknowledged and developed, and provide a new context relating to the perception of women administrators on the leadership challenges they face.

Key Words: Women, administrators, management, headteachers, Government-Grant Aided primary schools.

E2014-54 The effect of nutritional counselor's knowledge of diabetic management on patient's recovery rate: case of Provincial General Hospital, Nakuru

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Abstract

The social, cultural and psychological approaches in the treatment of chronic diseases like diabetes are clinically being practiced today. Nutritional therapy has come to be the most reliable support regimen that a diabetic patient can benefit from and it is always preceded and controlled through nutritional counseling. The impact of nutritional counseling on the recovery rate has been proved by studies, but less is done on the effect of counselor's knowledge on the patient's recovery rate. The objective of this article is to establish the effect of counselor's knowledge of diabetic management on patient's recovery rate. In order to have the study carried out

successfully, a descriptive survey with ex-post facto design was used to assess the effectiveness of the counselor's nutritional knowledge on diabetic management. The sample population consisted of 283 respondents that included 8 nutritional counselors 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 was used. Expert judgment was used to improve on content and construct validity of the items. The obtained data was subjected to analysis using SPSS analytical tools so as to get results. The results showed that there was a statistically significant link between the nutritional counselor's knowledge of diabetic management on patient's recovery rate. The results call for frequent training of nutritional counselors on diabetic management in hospitals.

Key words: Diabetic management, Diabetic patients, Nutritional counselors

E2014-55 The Effect of Reading on the Mastery of English as a Second Language

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Abstract

The aim of teaching any language is proficiency in the language. However, in most cases there are complains that most students have poor proficiency in languages. The problem of poor proficiency is more critical if the language is taught and learned as a second language. In Kenya English is the medium of instruction and also the official language. It is, therefore, expected that students at all levels of education should have good mastery of the language. However, educationists, language researchers, Kenya National Examinations Council and employers argue that the standard of the language in the country has deteriorated. That is, the poor performance in English language has become a matter of grave concern to all stakeholders in education. Many factors have been mentioned as the causes of poor mastery of English language especially at Form Four level; a final stage of learning the language before students join various post secondary school training institutions. According to various stakeholders in education, some of the causes of poor mastery of English language are: use of sheng, reliance on mobile telephone and computer games, lack of a reading culture, and teacher related factors. This paper discusses reading as one of the ways of developing mastery of English as a second language (ESL). The effect of reading on the development of mastery of ESL has been extensively researched on and the findings point to a strong positive relationship between the two. Thus, this paper will discuss the effect of reading, both extensive and intensive, on the acquisition and learning of vocabulary, grammar, and mechanics of writing. The data for this paper will be collected through library research and document analysis.

E2014-56 The Role of Cash Transfer Programs in Development in Kenya

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Abstract

Kenya's population is approximately forty million people. It is estimated that about 46 percent of the total population are poor. Consequently, such persons cannot afford basic needs especially food. It is in the light of this plight by many Kenyans that the government introduced social security measures to address the difficulties faced by her people. This paper examines the role of cash transfer programs in alleviating the suffering of the poor in Kenya and how they contribute to development. These programs include: The Older Persons Cash Transfer, Persons with Severe Disabilities Cash Transfer, Orphans and Vulnerable Children Cash Transfer and Urban Food Subsidy Cash Transfer. The overall aim of these programs is to alleviate the suffering of the poor and to promote the human capital of the beneficiaries for development. The paper is based on document analysis and personal experience of the authors in implementing the programs. The programs are managed and implemented by the Ministry of Labour, Social Security and Services. So far, monitoring reports indicate that the programs have had positive effect on recipients as well as communities. Apart from improved health of beneficiaries, it has been noted that the programs have contributed to spurring development among most benefitting households and individuals. Nevertheless, there are challenges that need to be continuously addressed.

Key words: cash transfer, program, poverty, poor, older persons, disabilities, children

E2014-57 The Study of English Animal Idioms: The Nexus between Theory and Applications

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Abstract

Available literature on English language teaching reports that animal idioms display semantic opacity and make it difficult for a second language learner to comprehend meaning. This study, therefore, set out to analyse 20 purposively sampled English animal idioms in order to establish the nexus between theory and applications of idioms. To achieve the objective of this study, the fundamental principles of the Hybrid model of idiom processing which combines both non-compositional and compositional approaches were adopted. The study adopted a survey research design because the focus was on analysing sampled English animal idioms that could be used to highlight the nexus between theory and applications. The data for this study were gathered manually from the Macmillan English Dictionary (2007 edition), Oxford Advanced Learner's Dictionary (2010 edition) and the internet. Content analysis guided the analysis of the English animal idioms in order to identify the parts of the idioms that were decompositional and those that were non-decompositional. The study found that the Hybrid model of idiom processing not only contributes a significant piece to the jigsaw of comprehension of English animal idioms, but also insights to scholars for further research in English idioms. Thus, this study recommends a

shift in paradigm from traditional methods of teaching idioms to the Hybrid model of idiom processing.

Key words: English Animal idioms, Hybrid model of idiom processing, nexus, applications

E2014-58 The Impact of Curriculum Content and Community Support on Primary Schools' Academic Achievement in Central Nyanza Region, Kenya

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Abstract

Performance of primary schools in Kenya Certificate of Primary Education Examinations (KCPE) in Central Nyanza has been poor over the years. This has contributed to frustrations among parents, teachers, and community. This is because KCPE results are used for secondary school placement and other accountability purposes. The study sought to establish how the curriculum content and parent/community support determine primary schools' academic achievement. The study was guided by the Transaction Theory of Teaching/Learning. The area of study was Central Nyanza Region, in the Counties of Siaya and Kisumu. The study employed the mixed methods approach and was conducted using descriptive survey design. The instruments used to collect data included questionnaire, interview guides and observation checklist. The sample was selected using stratified and simple random sampling. Data was collected from 136 schools where 136 head teachers and 493 teachers were respondents. The author interviewed 36 teachers. The unit of analysis was primary schools. The data was analysed using descriptive and inferential statistics. Descriptive statistics, such as measures of central tendency and percentages, were used to analyse the data. Eta square was used to test the hypothesis. The level of significance was 50%. The study found that the curriculum content influenced achievement. Another factor which determined schools' academic achievement was the parent/community support. The study recommended that syllabus coverage should be monitored regularly and the schools should be provided with adequate resources necessary for curriculum implementation such as classrooms. The community should also support teaching and learning in schools by encouraging their children to attend school regularly.

Keywords: Curriculum Content, Community Support, Primary Schools Achievement, Kenya

E2014-59 The Role of School Disciplinary Committee in Managing Student Discipline in Public Secondary Schools in Rongai District, Nakuru County, Kenya.

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Abstract

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

Key words: School Disciplinary Committee, student discipline, management

E2014-60 Influence of Teacher-Educator Characteristics on the Integration of ICT in the Teaching and Learning Process in Teacher Education in Kenya

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Abstract

In this paper, we explore the the relationship between teacher-educators' age, gender, level of education, and teaching experience and the integration of ICTs into teaching in primary teacher education. The simple random sampling technique was used to select six teacher training colleges in Kenya and 169 respondents who participated in the study. Data was collected using a questionnaire, an interview schedule and an observation schedule. The data collected was analyzed descriptively with the help of SPSS program version 16.0 for frequencies, means, standard deviation and percentages. The inferential statistics used to determine relationships among variables. Regression analysis was used to determine the best predictors of ICT integration among the independent variables. A p-value of less than 0.05 was interpreted as significant. Results indicated that both male and female teachers were found to have low levels of integration. But as for age, the younger teacher-educators had higher integration levels than the older teacher-educators. There were no relationships between their level of ICT integration in teaching and gender. The findings also showed insufficient evidence to consider the level of education as a predictive component to the level of ICT integration. This implies that education does not influence ICT integration in teaching. Similarly the results provided insufficient evidence to prove that teaching experience is a predictive component to the level of ICT integration into teaching. On the whole, we recommend that information and communication

integration be made part of undergraduate training in universities in order to equip future teacher educators with ICT skills; the government should equip teacher training colleges with sufficient and modern computers with internet connectivity to enhance access.

Keywords: Teacher-Educators, Age, Gender, Level, Education, Teaching Experience, Integration Level, ICTs, Teaching, Public Primary School Teachers Colleges, Kenya

E2014-61 Hygiene Related Factors That Influence Teacher Turnover in Public Secondary Schools in Baringo District, Kenya

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Abstract

High employee turnover is a common occurrence in the teaching profession. The costs of teacher turnover are usually very high and can have significant financial implications on the government. Studies conducted in the field of management indicate that the character of human resource is highly influenced by two factors namely hygiene and motivational factors. This paper examines the hygiene related factors that influence turnover among teachers based on a study conducted in Baringo District secondary schools. The Descriptive survey research design was used. All the 21 public secondary schools in Baringo district were used. The simple random sampling technique was employed to select 97 teachers out of the total population of the 329 TSC teachers in the district. Data was collected using a questionnaire and an interview schedule. The data collected were analyzed using both descriptive and inferential statistics. It was established that teachers' dissatisfaction with salaries, working for the same employer for too long and communication-related issues at work informed their intentions to quit work. The study recommends that the government should harmonize teachers' salaries and allowances with those of other sectors in the government. In addition, teachers should be given allowances such as leave and other benefits such as medical insurance. From the study, the ministry of education (MOE) and TSC may use the findings to develop policies that will make teaching more attractive. Similarly, they can draw useful lessons on staffing issues in the teaching profession and can use the findings to guide school managers to recruit the right calibre of teachers who can stay longer in the profession.

Keywords: Hygiene Factors, Teacher Turnover, Public Secondary Schools, Baringo District, Kenya

E2014-62 Factors Influencing Grade Repetition Among Rural Primary School Pupils In Nandi North District, Kenya

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Abstract

Investment in education is widely recognized as an important element in a country's development strategy. As such, the enhancement of productivity, the reduction of poverty and

income inequality, an improvement in health and the consequent economic growth do justify individuals and governments' investment in education. However, the large spending on education should be tied to measures of ensuring that wastage in the education sector is reduced or even entirely eliminated with the view of approaching perfect internal efficiency and reducing educational costs. It was essential, therefore, to examine the internal functioning of the primary school system of education in order to determine the factors that influence repetition, and to determine the level of efficiency of the primary school cycle in Nandi North District. The study adopted descriptive survey design. It targeted 6322 standard eight pupils, 2569 class teachers and 286 headteachers. Out of this target population, a sample size of 1970 standard eight pupils, 769 class teachers and 86 head teachers was selected. Data were collected using class teachers' and pupils' questionnaires and head teachers' interview guide to gather information on the factors that influence grade repetition. Data were analyzed by use of descriptive statistics and the findings presented in form of figures and tables. Data from the study suggested that repetition is still allowed in primary schools even though there is no evidence that it is helpful. It was also found out that parents and teachers continue to play a big role in deciding whether a pupil repeats or not based on whether or not a child has performed poorly or has not mastered the content in that grade. This lack of mastery of content and poor performance was largely occasioned by absenteeism. It was therefore recommended that there is need to make it imperative that all schools adopt a policy of automatic transition and to make repetition illegal.

Keywords: Factors, Influence, Causes, Retention, Repetition, Pupils, Rural Primary Schools, Nandi North District, Kenya

E2014-63 Application Of Social Media In Secondary Education, A Focus On Nakuru Municipality, Nakuru County

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Abstract

Social media and Internet-based tools that promote collaboration and information sharing can be used in academic settings to promote student engagement and facilitate better student learning. This study aims at looking at ways through which social media can be used to improve education in Kenya, a focus on Nakuru Municipality. Social learning theory states that people learn from one another via observation, imitation, and modeling. The objectives of this study include: To understand the existing social media based educational model in developed countries, to understand the existing educational model in Kenya, to analyse possibility of improvement of the models in Kenya by applying knowledge gained from models in developed countries. The study will employ a descriptive survey research design. The target population will be 2000 respondents. The sample size will be 410 respondents. Questionnaires and interview schedules will be used as instruments for collecting data. Data analysis will done using descriptive statistics after data cleaning and coding. Quantitative data will be analyzed using frequency counts, means and percentages while qualitative data will analyzed by tallying the numbers of similar responses. Results of data analysis will be presented using frequency distribution tables, bar graphs and pie charts. It is hoped that the data will enable understanding of socio-economic values, culture differences, teaching methods, group

work, participation methods, student interactions, and several other issues pertaining to education.

E2014-64 The Effects of Socio-Economic Status on Student Performance in Urban Slums of Laikipia County, Kenya

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Abstract

Millennium goal 2 focuses on the achievement of universal primary education under which target 3 strives to ensure that by 2015 children everywhere, boys and girls alike will be able to complete a full cycle of primary schooling. In spite of the commitment by the government of Kenya to the provision of free primary education, parents still cater for other expenses such as uniforms, lunch, transport, books, examination fees, sports and other expenses. This implies that free education is not necessarily free especially for poor parents living in urban slums. This paper is based on a study that investigated the effect of socio-economic status on academic performance in Laikipia County. The study adopted a case study design. Data was collected using questionnaires and interview guides. The pupils were sampled using simple random sampling while the teachers and head teachers were purposively sampled. The analysis indicated that families with a lower socio-economic status often struggle with providing academic support for their children, they often display difficulties with language skills and struggle with reading, have low academic expectations, limited resources and have low academic performance. The study established that children from lower socio-economic status are more likely to exhibit behavior related learning problems and that the academic level of the parents was correlated to the performance of pupils in exams. The researchers recommended an empowerment programme for parents living in urban slums through income generating projects, posting special needs education teachers to schools in urban slums to teach children alternative behavior, strategies to motivate learners through career guidance and counseling to increase their educational motivation and the establishment of adult-literacy classes for parents in urban slums.

Key words: Urban slums, socio-economic status, academic performance

E2014-65 The Impact of Portrayal of the Family Image in Print Media on Kenya's Christian Marriages

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Abstract

Newspapers and magazines all send signals about social roles for instance how to act in a certain situation in their feature stories and the interviews of prominent personalities. The current trend is that features and interviews in magazines and newspapers have prominent personalities who are in polygamous settings as well as stories on sexuality and modern way of relating. This is in contrast with the teachings of Christianity. The main objective of the study was to investigate the portrayal of families in the mainstream print media in Kenya and its impact on the readers' marriages and the family unit. Information projected by media often impacts on their target audience. Family ideals and morals are washed off and replaced by the new "norms" portrayed in media. The study was guided by the socialization theory of media. The socialization function of media observes that media helps people to know what is expected of them and how to fit in society. The study was undertaken in Nairobi city. It adopted a descriptive survey design. The target population was residents in the city. A sample of 200 respondents was selected through stratified sampling and simple random sampling derived from the population. The data was collected through questionnaires. Data analysis encompassed descriptive statistical methods. The study revealed that there is a relationship between how the media portrays marriages and the family unit and the perception of its audiences on marriage and the family. The study is important such that it yields data and information on the impact of portrayal of families by the media on the 21st century marriages in Kenya. The study recommends that mass media should be the vehicle to instill family values and morals that uphold the families in today's society.

Key words: Print media, Families, Christianity, Marriage

E2014-66 Perceptions on the Effectiveness of Guidance and Counselling Programme in Enhancing Students Career Competencies: A Case of Secondary Schools in Koibatek District, Kenya

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Abstract

Guidance and counselling programme was first implemented in Kenyan secondary schools in 1971 in accordance with the Kenya Education Report (G.O.K, 1964) that recommended provision of advice on careers and information on employment opportunities to students. The programme was emphasized in Koibatek District secondary schools in 2001 after the ban of the cane. There was need therefore to establish whether the guidance and counselling programme has been effective in enhancing student's career competencies as perceived by secondary school students, teacher counsellors and head teachers. This study utilized ex post facto causal comparative design. The respondents of the study were 302 students, 18 teacher counsellors and 18 head teachers from 18 public secondary schools in Koibatek District. The sample were drawn from 1366 form three students, 25 teacher counsellors and 25 head teachers. Random sampling

method was used to select student respondents. Purposive sampling method was used to select teacher counsellors, head teachers, and District Education Officers who were interviewed. Data for the study were collected using open and closed-ended questions and interview schedules. Descriptive and inferential statistics were used to analyze the data. Means, Frequencies and percentages were the descriptive statistics while one-way analysis of variance (ANOVA) was the inferential statistic. The statistical package for social science (SPSS) version 11.5 was used to aid data analysis. Cronbach's Alpha coefficient was used to estimate the reliability. Reliability coefficient of 0.87, 0.60 and 0.92 for students' questionnaire, teacher counsellors' questionnaire and head teachers' questionnaire were obtained respectively and were considered acceptable for this study after some adjustment on teacher counsellor's questionnaire. All the respondents who participated in the study perceived school guidance and counselling programme as effective in enhancing student's career competencies. Education stakeholders and policy makers may use the finding of this study to strengthen the programme services. It is recommended that guidance and counselling programme be implemented on a school wide basis as a matter of priority in all secondary schools to equip all students with prerequisite career competencies.

Key words: career competencies, guidance and counselling programme and perceptions

Ex2014-11 Solid Waste Management - CLIENVIRON CARE

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Abstract

This work proposes effective innovative ideas of managing solid waste.. This is after observing how and the manner in which solid waste is being managed mostly in the upcoming towns in Kenya such as Migori, Narok town among others. As a result of the study carried out in Narok town, there is need to approach solid waste management differently. For instance, poor waste management has resulted to air pollution and water pollution of waters of river "Enkarenarok". There is therefore a need to intervene and change the outlook of the town's environment which may be replicated in other urban areas. Apart from the towns being clean, there will be creation of jobs especially to the youth thus empowering them economically.

Ex2014-12 Integrated health card system in Bondo

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Abstract

The use of health card system in the health sector is of great significance. Once registered, a person is given a card with their credentials (i.e. Name, ID Number and contacts). The patient will no longer be required to give their credentials each time they visit a hospital in the region covered by the card system. This simplifies patient's identification. When the card is inserted in a reader it provides up-to-date information about the patient's medical history and can be updated. These records are stored in a common database in the region which will be maintained by a public health administrator.

This technology will be tested to provide public health surveillance within Bondo region. Analysing the region's health and major causes to certain diseases will be easy. If a high number of patients are diagnosed with the same disease, from a certain location within a day, the system will alert the administrator. This will help identify cases of disease outbreak. The health sector can therefore create awareness of such outbreaks and can advice on how to prevent it. The system will use fingerprint biometric authentication. Patients will provide their fingerprints apart from pins ensuring that information about the card holder is secure. Data encryption will also be implemented for enhanced security. If implemented, the health card system will help Kenya achieve its Vision 2030 goal of providing quality health services and reduce the paper work.

Ex2014-13 Crates Navigator

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Abstract

Crates Navigator is an application that assists a firm or company in navigating through the entire process of crates distribution (crates that carry company's products) in and out of a company. This operation of distributing crates to various points - May it be when supplying products to markets or fetching products from farms or warehouses - is faced by several challenges.

Crate Navigator addresses the following challenges/problems;

- a. Traces the whereabouts of a crate(s).
- b. Keeps an up-to-date record of crates currently in use.
- c. Depicts number of;
 - Lost crates and location where a crate(s) was lost.
 - Crate(s) not yet back from the various markets and the specific name of market.
 - Crates in various warehouses, farms or stores. Whether empty or filled ones.
- d. Reduce the bulkiness of keeping books of record and the cost of buying the same books.
- e. Save time while counter-checking the record of crates as compared to doing it manually.
- f. Synchronize the entire operation of crate distribution amongst all warehouses, farms or stores since the database is shared. This harmonizes the entire operation.
- g. Provide an easy follow up of movement of crates from of one point to another.

- h. Enhance transparency in the entire operation of crates distribution since time and name of person recording the crates is captured.

This innovation of Crates Navigator can be applied in several firms including, Milk Processing Company, Horticulture Farms, Bakeries, Soft drinks industries, Breweries and Kenchic where products are packaged in small quantities.

Ex2014-14 Re-usable rehab bags

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Abstract

Re-usable rehab is an innovation which combines quality, eco, convenience and style. Retail customers in Kenya are discouraged from using plastic bags through this innovation. Kenya has about 300, 000 daily customer traffic in supermarkets and other retail outlets which facilitate the dispensing of more than one million plastic paper bags. Majority of the plastic bags customers get after shopping end up in the environment, clogging sewers and drains, polluting soil, posing a danger to marine life and causing death to livestock when inadvertently consumed. Re-usable rehab is an innovation that wants to address such environmental and lifestyle problems through the recycling of old bags. Re-usable rehab bags are sustainable since they can be easily disposed once their lifecycle expires and they are also pocket friendly and durable because they can be used for a minimum of one year. These multi-purpose bags come in various sizes but they are all large enough to carry everything consumers need and are perfect for groceries, but are also a versatile solution for packing a bag when going for a picnic, fishing or taking a hike. They are easy to use and most importantly good for the environment.

Ex2014-15 Online Academic Notes (camponotes.org): Addressing the challenges facing access of informative course notes in campuses

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Abstract

Because of the increase in technology, portable gadgets which have the ability to display every kind of document formats including portable document format (pdf), electronic publication (epub) and other types of document formats have been widely used in learning. This project will be able to provide alternative online notes which will increase the ease of access of academic notes to university students in helping them gain more information. This project will make all academic notes available to students resulting to ease of access of academic materials. The researcher has developed an interactive website that any student can use to get updated notes or even upload some notes by a specific topic which can be later categorized by the system for quick and easy retrieval. Students especially in Kenya have

embraced technology and this can be a great tool to use to administer those who can be able to access it any time they want. Failing an examination can sometimes be as a result of minimal research, lack of notes, and lack of understanding of the subject during their course of study, missing lectures among others. With this in place, many of the students in this bracket will be able to access the website and sample reading materials. Lecturers tend to give about 40% of the course understanding to students and the students themselves are required to fill in the other percentage by themselves, hence they are required to do research from libraries and the internet to boost their understanding. This will make research even easier and better because of centralization of information.

Keywords: Academic, Information, Documents, Research, Topic, Lectures, Notes

Ex2014-16 OutLetPOS Abstract

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Abstract

For small business owners ringing up sales is one thing. Finding a way to streamline their inventory management, understand their customers, improve their service delivery and grow their business is another. They need a Point of Sale System (POS) that is conveniently affordable and reliable.

OutLetPOS seeks to empower small enterprises with a cheap POS that is easy to setup ,easy to use while maintaining a minimal footprint. It seeks to be a turnkey business solution for SMEs that empower them to streamline their sales process and increase the profits and customer satisfaction.

The system will include but not limited to

1. Full inventory control
2. Receipt printing
3. Daily and period reports
4. Accounting
5. Stock reports
6. Sales and Purchase
7. Sales and Purchase returns
8. External Bar code reader

Symposium S2014

S2014-01 The Contribution of Health Psychology to the Reduction of Health Cost in Kenyan Urban Areas

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Abstract

Key purposes of health psychology are to use psychological principles and strategies to prevent and manage health problems, encourage healthy lifestyles, and modify behaviors that create health risks. For that reason, the eventual contribution of health psychology in healthy living now and in future cannot be undermined. Optimistically, over the decades there has been a rise in recognition of psychology's contribution to the health field. The most powerful strategies have been preventive and health promotion; these have marked significant contributions towards health to date. Nonetheless, we continue to attest to the surging cost of health care affecting all of us today as well as major unconquered killer diseases. With the evidential reality of helplessness in the current circumstances in health care, health psychology must be given full recognition, and capacity to collaborate with clinical practitioners for reducing the overall cost of health and further benefits for healthy living. This paper will then attempt to establish:

- The applicability of psychology in clinical treatment
- The lifestyles that determines health
- The psychological aspects of illness
- The role of health psychology and strategies in intervening for healthy living
- The importance of health trainings, and its economic implication

The assumption of this paper is that by responding to the above concerns; the paper will in the end bring forth the importance of health psychology and its input in enhancement of healthy living, and consequently the reduction of cost of healthcare among the populations. In the end, we will witness a resilient workforce for economic improvement.

S2014-02 A Low-Cost Microcontroller-Based Lightning Monitoring Device

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Abstract

Lightning data is not only important for environmental or weather monitoring but also crucial for safety purposes. A device that monitors and keeps track of occurrences of lightning strikes has been developed. The digital output of the sensor and data from GPS are connected to a microcontroller through Serial Peripheral Interface. The data is then logged into an SD card. The interface program allows sampling parameters such as distance from the lightning strike, time of strike occurrence and geo-location of the device. For archiving and analysis purposes, the data can be transferred to a PC with a graphical user interface program through SD card or using a USB link. The device has many advantages as compared to other lightning sensor stations in terms of huge memory, lower power consumption, small size, greater portability and lower cost. The device shall be used in designing lightning networks.

Key words: Lightning monitoring, Microcontroller, Data logger, Sensor

S2014-03 An Ecological Assessment of potential impacts of riverbed sand harvesting to riparian ecosystems in Kenya.

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Abstract

River sand riparian ecosystems are among those most frequently damaged by human activities. This paper deals with the assessment of environmental resources affected by sand harvesting from riverbed and riparian ecosystems in Kenya. The research involved a field survey of vegetation patterns comprising the riparian ecosystems to quantify the effects of sand harvesting and related operations in mined and unmined areas of rivers Thwake, Kaiti, Muooni and Iuuma in the study area of the larger Tana and Athi Rivers catchments. The methods used to collect data were transectline to measure river widths and quadrats of 4m x 4m for herbaceous and short shrub vegetation within the channel banks and river bed, and on high banks quadrats of 10m x 50 m were used because of presence of trees and big shrubs. Domin scale ranging from 1-10 was used to quantify vegetation percentage cover per plant species. Oblique photographs were used to establish the extend and the intensity of damage caused on the river bed and riparian ecosystems. The survey work was carried according to the procedures of the National Vegetation Classification (NVC) scheme. VESPAN III computer package method was used for vegetation community classification. To analyze the results of the Vegetation community, The TWINPAN (Two-way Indicator Species Analysis) and DECORANA (Detrended Correspondence Analysis) methods were used. Inferential statistics methods were used, such as the Students 't' test and standard deviation calculation method. The results showed that

vegetation was found within the first 50 m from the river bank according to the government policy. Beyond 50m the vegetation markedly changed. The unmined sites had 18 plant species on average compared to 15 plant species in the mined reaches. The students 't' test was statistically significant at the 95% confidence interval. The degree of damage to riparian vegetation is related to sand extraction method used. Other results, conclusions and recommendations are discussed in detail in the paper.

Key words: Sand harvesting, ecological assessment, VESPAN III, TWINSPAN, DECORANA, Vegetation, impact.

S2014-04 Analysis of Received Signal Levels in the Use of Cell Zooming For Outage Compensation

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Abstract

Today's technology is shifting from manual intervention to complete automation. In mobile networks, shift is towards self organizing networks. These are networks with robot like ability. They should work with minimal human intervention as proposed by third generation partnership project (3GPP). One area of focus in self organizing networks is self healing. There are various stages involved in self healing but when the preliminary efforts fail, this will lead to total failure. However, self healing should initiate outage compensation for the failed unit. The focus of this study is to provide coverage where a radio has failed by use cell zooming method. One critical factor on the success outage compensation is Received Signal Levels. This research simulates signal strength pattern for various configurations using Atoll Planning Tool. Preliminary findings in the region of study indicate that the received signal levels are well above the set target of -105dBm. This implies that cell zooming can be employed with minimum effort required to maintain signal strength within the recommended levels. Further research will seek to break through the resources limitations and recommend an acceptable self healing design that can be adopted by operators as a step towards Self Organizing Networks.

Keywords—Cell Zooming, Outage compensation, Self-Healing, Self-Organizing Networks (SON), Received Signal Levels, Radio Network Planning

S2014-05 Analysis of the effect of application traffic load variation on the Delay performance of MANETs

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Abstract

Mobile Ad-hoc Networks (MANETs) is collection communication and computing devices equipped with communication capabilities in which the nodes communicate with each other without any pre-existing infrastructure. Unlike the infrastructure based networks, there are no BTSs and BSCs in MANETs. The nodes involved in the MANETs, therefore, act as both routers and hosts. The network topology varies dynamically and unpredictably due to mobility of the nodes. The conventional IP based routing protocols are not able to handle the unique characteristics of MANETs. Different protocols that can handle the unique characteristics such as dynamic topology have therefore been developed. MANETs are usually deployed in critical situations where a considerable real-time communication is required. The delay performance analysis of MANETs is therefore crucial. The delay is influenced by different constraints such as application traffic load, bandwidth, mobility speed and protocols used.

In this research the effect of the FTP application traffic load variation on the end-to-end delay performance of MANET was analyzed. Ad hoc On-demand Vector protocol (AODV), Dynamic Source Routing (DSR) and Optimized Link State Routing (OLSR) protocols were used to analyze the effect of FTP low, FTP medium and FTP high loads. The analysis was conducted through simulations using software called OPNET modeler on which different MANET scenarios were designed, modeled and simulated. The end-to-end delay performance characteristic of the OLSR was found to be best followed by AODV in all the traffic loads.

Keywords-MANET, Delay, FTP, AODV, DSR, OLSR

S2014-06 Challenges and Benefits of Practicing Exclusive Breastfeeding (EBF) in Africa

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Abstract

The objectives of this article include the benefits and challenges of (EBF), the role of peer counselor in EBF practices, government, fathers and health workers roles in reproductive life of lactating mothers in Africa.; Every infant and child has the right to good nutrition as stipulated by the convention on the rights of the child (WHO, 2014), EBF is breastfeeding an infant on human milk without any supplementary except for vitamins, minerals and medication for 6 months (Gartner, 2005), under nutrition is associated with 45% of child deaths, about 38% of infants (0-6) months were exclusively breastfed, globally and 800,000 lives could be saved yearly if 0-23 months infants were optimally breastfed (WHO, 2014). In Africa 49% of infants in Eastern/ Southern, 24% in western/central were exclusively breastfed (Unicef, 2012). The prevalence of EBF dropped 17% to 13% in Nigeria between 2003-2008 (FMOH, 2011) and in Kenyan EBF practice improved from 13% to 32%, Non exclusively breastfeeding in the in the first six months of life results in 1.4 million deaths worldwide. Peer counselors on EBF promotion in Burkina Faso, Uganda and South African communities indicate a remarkable

increase in the practice from 35%-79%, 44%-82% and 6% - 10% in all the countries respectively within 12 and 24 weeks of age. Improving EBF practice in Africa depends on stakeholders, pregnant mother, fathers, healthcare workers, government at all levels, support group community health workers and family members especially the mothers in law.

Key Words: Exclusive Breastfeeding, Benefits, Challenges, Prevalence, Infant Mortality, Maternal Nutrition.

S2014-07 Baseline Survey on Pre- and Post-Harvest Factors Affecting Sorghum Production (*Sorghum bicolor* (L.) Moench) in Smallholder Farming Communities in Kenya

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ABSTRACT

A farm survey was conducted in three representative administrative counties of Siaya, Nakuru and Makueni in Kenya to determine the pre- and post-harvest factors affecting sorghum production. Structured survey questionnaires were administered in a total of 95 households randomly sampled using snowballing sampling procedure. Socio-economic data collected were subjected to descriptive statistics using cross tabulation model. Results showed that 44.2 and 55.8% of the farmers preferred local and improved sorghum varieties, respectively. The main sources of sorghum seed were farmers own seed (33.7%), from neighbour / market (24.2%) and farm input distributors (42.1%). Sorghum grains were either stored in shelled form (88.4%) or on panicles (11.6%). Fifty seven percent (57%) of the farmers observed moulds in stored sorghum grains whereas 42.1% did not observe any mould. The study further established that farmers maintained a diversity of sorghum landraces unique in their adaptation, food quality, grain yield, quality of harvested products and biotic stress resistance. These findings could be used to explain the perennial food insecurity in these regions known to have huge potential for sorghum production.

Key words: mould, food insecurity, *Sorghum bicolor*,

S2014-08 Decision Making in Agriculture, Fisheries and Forestry: Application of Operations Research

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Abstract

Operations research is playing an important role in the analysis and decision making of natural resources, specifically, in agriculture, fisheries and forestry. At some level, these three

application areas are quite distinct. The time horizons of growth and extraction (or harvesting) vary from months to a year for fisheries and agriculture, to almost a century for some tree species. Research in all three areas is at different levels of advancement in terms of the methodology currently developed and the acceptance of implementable plans and policies. In agriculture, farmers are primarily concerned with how to plant crops and raise animals more efficiently. Fishermen are interested in predicting fish populations, allocating fleet effort, and avoiding fish depletion. Decisions in forestry are centered around the strategic, tactical and operational levels of managing plantations and public lands to meet demands while adhering to supply restrictions, which are coupled with events such as forest fires and policies. In this paper, we solve sample problem for each of the three applications and recommend some others problems.

Keywords: operations research, optimization, linear programming, mathematical modeling, decision making

S2014-09 Design of a Computer-Based Optimized FLC Model Using FPGA Technology for Regulating Greenhouse Climate.

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Abstract

Kenya has embarked on Vision 2030 to fast track its economic power. One of the pillars of Vision 2030 is “*Economic Pillar*”. Agriculture being one of the backbones of Kenyan economy is prompting the Government to put a lot of emphasis in modern farming techniques. Global climatic changes have been a major challenge. As a result, farmers have adopted greenhouse as one of the alternative ways of farming in order to sustain their food basket. However greenhouses in Kenya are still controlled manually which leads to a lot of inefficiencies in resource utilization. This paper presents a model of optimized Fuzzy Logic Controller (FLC) using Field Programmable Gate Array (FPGA) to control tomato greenhouse climate parameters (temperature, humidity and light intensity) that provides a solution to greenhouse farmers. The realization of optimized FLC consisted of the following stages: 1) Choice of input and command variables, 2) Fuzzification, 3) Rule base creation, 4) Choice of the fuzzy inference, 5) Defuzzification. A model of fuzzy logic controller was designed based on Xilinx Spartan 3E field programmable gate array (FPGA) circuit and programming was done in VHDL. This model was simulated in a tomato greenhouse using LabView modeling software environment and was able to automate the greenhouse climate by controlling actuators such as humidifiers, fans and light_blokors. The model achieved results that are within the optimal range. The researcher recommends the real implementation of the designed FPGA based fuzzy logic controller in tomato greenhouses, which will optimize both resources utilization and production as well provide conducive climate.

Keywords: FLC, FPGA, Actuators, Greenhouse, Computer-Based, VHDL,

S2014-10 Development of Basic Learning and Communication System for School Children with Speech Disabilities Using Mobile Platform

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Abstract

The concept of community access to information using information and communication technologies (ICT) has gained widespread attention as a strategically vital response to the perpetual lack of affordable access to information and ICT services in the developing world. Community access to information and ICT services is not in itself a new concept. Besides, it provides an encouraging policy approach to overcoming the wide disparities of access to information, particularly in the education sector. ICT services can provide opportunities for disabled students especially speechless students to participate in the newly emerging social and economic orders. A vast number of students have no obstacles to communicate or learn through the many technological educational tools that provide different functionalities and services. Even though the technology is becoming more incredible and sophisticated, there is not much of the development and improvement in the communication systems and learning or education application systems for speech disabled students.

This paper, therefore, examines the development of ICT application using mobile platforms for speechless students in the developing world. Hopefully, the success of this developing project would become the much needed innovation that will bring the revolution for the society and more especially for the speech disabled students in the world. Basic learning and communication system for school children with speech disabilities using mobile platform constitutes the main contribution of this paper.

Keywords: Information and communication technology, learning, Speech disable students; Mobile applications

S2014-11 Diarrhoea Prevalence and Sanitation Facilities used in Bomet Municipality, Kenya.

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Abstract: The study presents data collected in an assessment on diarrhoea prevalence and sanitation facilities used in Bomet municipality. Water, Sanitation and Hygiene (WASH)-related diseases represent a real public health problem in Kenya. They are the number one cause of under-five hospitalization, mortality and over 50% of hospital visits. Sanitation facilities in

Bomet Municipality are generally unimproved hence people have no choice but to rely on public or shared toilets or practice open defecation anywhere they find convenient and accessible. However, there are fears of possible hazards of use of such facilities because of the human contact with excreta. This study was conducted to determine the relationship between sanitation facilities used by households and diarrhoea in Bomet municipality. Multi-stage random sampling method was used to obtain a sample of 151 respondents. The questionnaire was the main instrument for data collection. The SPSS was used to manage data and analysis done using descriptive statistics and Chi-Square at 5% level of significance. The findings show that there were instances of diarrhoea reports among the households in Bomet municipality. The study also confirmed that there is a significant association between shared toilets/latrines and diarrhoea as indicated by significance level of 0.0. The study concluded that there is need for improved sanitation in Bomet municipality in order to ensure hygienic separation of human excreta from human contact hence better health.

Key words: Diarrhoea prevalence, Sanitation facilities, improved sanitation

S2014-12 Diatom ecological indicator values in the assesment of water quality in three rivers of Lake Victoria catchments

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Abstract

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 ammonium-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 to estimate water quality. The diatom ecological indicator values can complement the routinely employed physical and chemical methods of assessing water quality, pollution and monitoring of aquatic environments in the region.

Key words: Diatoms, biological indicators, water quality, pollution, river monitoring

S2014-13 Digital Educational Resources: Making and Donating Swahili Sayings Motion Pictures

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Abstract

As far as digital content is concerned, Africa in general and Kenya in particular have remained behind, (contributing less than 5%) mostly downloading digital content developed in Pacific, Asia, Europe and America or by white Africans. With this in mind, I chose to develop digital content (of Swahili Sayings Motion Pictures) use it in class and later donate it out as an Open Educational Resource (OER). Sayings are a universal topic used to give advice concerning life and which have been handed down generations. I deemed developing and donating Swahili sayings motion pictures for teaching as an attractive instructional method because it is interactive therefore likely to enthuse and motivate learners greatly while saving preparation time for the teachers to whom it is donated. In this presentation I will focus on how I made motion pictures and used them as instructional materials in a public secondary school in Nakuru Municipality, Kenya. In particular I emphasized on bringing contexts of the sayings to class digitally, reducing **Abstractness** and replacing it with near representations of real objects and situations as they are. I used participatory action research (PAR) with one teacher and Form 2 pupils in one secondary school. I collected data using different methods that included classroom observations, document analysis, informal conversations, interviews, a focus group discussion and reflection. By collecting and analysing data concurrently, findings of an earlier cycle informed a later one. Findings suggested that by using motion pictures to bring real contexts of Swahili Sayings to class, learners' understanding was made easy. Motion pictures are a motivation because they appeal to the learners' audio, visual and kinaesthetic senses as the learners testified. To save other teachers' preparation time, I uploaded a selection of my motion pictures on google + for open access. Some can be found in <http://www.youtube.com/watch%3Fv%3D3nYM8Y6E-zw>

Key words Swahili Sayings, Motion-Pictures, Making, Donating, OERs

S2014-14 Effective strategy to manage herbal Drugs for Effective Treatment of Diabetes by use of the variance function of the Difference Between two estimated responses

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Abstract

Medicinal herbs constitute an important source of raw materials for both the traditional and the conventional medicine. They are used as complement if not substitute to conventional medicine mainly due to lack of suitable, effective, cheap and reliable drugs at the time they are required and in many cases in the remotest places of the world. Active ingredients of herbal drugs are not quantified, thus different herbalist prescribe different concoction. This may lead to resistance development, overdose or under dose with fatal repercussion in the eventual treatment. There is need therefore, to formulate a mathematical model to determine the best mix of herbs to achieve the optimal response by use of planned design of experiment. Response surface methodology as a statistical technique is useful in modelling and analysis of problems in which response of interest is influenced by several variables for which the objective is to optimize the response. This is achieved by locating feasible treatment combinations for which the mean response is optimized. In any treatment arrangement, we seek a treatment or treatment combination that can be used to either reverse a condition, eradicate it or arrest it in order to minimize suffering or to help the patient bear a condition with less pain. This research employs response surface methodology to investigate effectiveness of herbal medicine in reducing the blood sugar level of a diabetic patient to a level that is acceptable. In this setup, observations are made to investigate effectiveness for particular dosage at reducing the blood sugar level with time. The variance function of the difference between two points is used to provide reliable advice on the range around which the dosage is desirable and time required.

Key words: Response surface; Variance; diabetic; Herbal-Medicine, 2000 Mathematics Subject Classification: 62K15, 62K20

S2014-15 Effects of Computer Based Learning on Mathematics in Students' Achievement in Secondary Schools among the Physically Handicapped Learners in Kenya

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Abstract

Learners with physical disabilities experience difficulties in manipulating writing materials due to missing limbs. Some of the postures they adopt make them strain when they stay in a given position for long, affecting their learning ability and reducing the degree of concentration in their studies. Mathematics is the worst perform subject among the physically handicapped learners in the Kenya Certificate of Secondary Education (KCSE) as indicated in the results of the years 2000 to 2012. There was therefore, a need to device ways to enable them to participate in learning with ease. Computer based learning is reported to be effective in the teaching and learning of complex concepts in physics and accounting and was considered to provide a solution in the handling of mathematics among the learners with physical disabilities in Kenya. Among the objectives considered were to find out the effects of computer based learning (CBL) on the physically handicapped students in their achievement in mathematics and established the existing software for teaching mathematics. The paper investigates the relationship in performance of mathematics between students exposed to CBL and those without that exposure.

This paper, based on Quasi experimental and correlation research designs provides evidence of effects of computer based learning in mathematics on students' achievement in secondary schools among the physically handicapped in Kenya.

Key words: Physically handicapped, Mathematics, Computer

S2014-16 Effects of *Moringa oleifera* Seeds on *Escherichia coli*, *Enterobacter aerogenes*, pH and Turbidity in Water from Selected Sources in Kitale Town

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Abstract

Moringa oleifera seeds are in use in many parts of Africa for treatment of water where accessibility of piped water is a major problem. The communities using these extracts believe that they reduce water turbidity and have effects water pH. *M. oleifera* seeds could be important in water treatment because it is environmental friendly and easy to obtain. However, little work has been done to verify the antimicrobial activity of these seeds and improvement of pH and turbidity of water. This study was undertaken to investigate the effects of *M. oleifera* seed extracts on pH, turbidity and selected indicator microorganisms. Water samples were sourced from KARI tap, Kipsongo stream and KARI dam. *M. oleifera* seeds were dried and ground to obtain powder for subsequent tests to investigate the antimicrobial activity and effects on turbidity and pH. *Escherichia coli* and *Enterobacter aerogenes* colonies were isolated from water samples and different concentrations of *M. oleifera* seeds powder extracts added. After incubation at 37°C for 48 hours, the lowest concentration of *M. oleifera* powder that inhibited growth of these organisms was noted. The study showed that *M. oleifera* seeds had significant ($p < 0.05$) effect on the turbidity reduction in all water samples. Turbidity reduction was found to be 4.08%, 67.23% and 69.38% for KARI tap water, Kipsongo stream and KARI dam respectively. The extracts also had significant ($p < 0.5$) effect on water pH from Kipsongo stream and KARI dam (2.97% and 5.09% respectively) but no significant effect on KARI tap water pH was observed. The *M. oleifera* seeds were also found to be effective against *E. coli* and *Enter. aerogenes* with the minimum inhibition concentration of 7.29 mg/ml for *E. coli* and 14.583 mg/ml for *Enter. aerogenes*.

Keywords: *Moringa oleifera*, indicator microorganisms, antimicrobial activity, water treatment

S2014-17 Enhancement of Power System Transient Stability with Different Wind Generation Technologies using AVR and PSS

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Abstract

In the last decade, wind generation has been the fastest growing energy source globally. However, higher penetration of wind energy into existing power networks raises concern for power system operators and regulators. This paper investigates the effect of wind power on the

transient stability of power systems. The automatic voltage regulators (AVR) and power system stabilizers (PSS) are introduced to a power system which has a high concentration of power from wind. Simulations are carried out using DIgSILENT PowerFactory. The results show that a better transient performance is achieved with the inclusion of both the AVR and PSS in the simulations.

Keywords: Squirrel cage induction generators, Doubly-fed induction generators, Transient stability, Automatic Voltage Regulator, Power System Stabilizer.

S2014-18 Estimation of Panel Data Regression Model with Individual Effects

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Abstract

A considerable amount of research has been done on estimation of time series and cross-sectional data in most past studies. However, not much work has been done on the estimation of panel data model , especially investigation of asymptotic properties of the estimators . Therefore, we investigate asymptotic properties of estimators of panel data model under some specified conditions. In particular, we will investigate consistency and asymptotic normality of the proposed estimators. To estimate the model, we apply two-stage least squares (2SLS) in estimating the fixed-effects component. Similarly, we will apply generalized least squares (GLS) in estimating the random-effects component. Finally, studies based on simulated data on analysis of panel data have received minimal attention in many literature. In order to test the practicability of the theories and investigate the empirical properties of estimators developed in this thesis we use simulated panel data.

Key words: Panel data model, Fixed-effect, Random-effects , 2SLS , GLS

S2014-19 Evaluation of wearable technology for Ubiquitous mobile Computing and Quality of Life

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Abstract

Science improves the quality of your life in many ways through application in technology. Technology is used everywhere and enriches our lives by making things more entertaining, convenient, and easy. In the past decade the gradual emergence of information technology as a new computing discipline has impacted on the Quality of life (QOL). QOL references the general [well-being](#) of individuals and societies. As computing moves from our desktops to our phones, we are looking into the future to see how technology will become increasingly ingrained in our movements and our active lives. They have the possibility to make us more knowledgeable about ourselves and our surroundings, and connect us with each other in an uninterrupted, more intimate way. The many promising prospects of Wearable technology and its applications have not perfectly materialized, and research into their effectiveness in QOL has left many unanswered questions. Findings from this paper have indicated positive effects and consequently a need for more in-depth and longitudinal research into the impact wearable technology on ubiquitous mobile Computing.

Keywords QOL, wearable technology, Mobile, Ubiquitous computing,

S2014-20 Evolving Computer Ergonomics For The Disabled In The Society

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Abstract

Human Computer Interaction (HCI) is key to the user interfacing with the computer system. Some individuals using computers have physical, cognitive, and sensory impairments. The needs of the physically challenged are never factored when Research & Development departments are designing state of the art inventions. Computer ergonomics looks at how man fits work and not work fitting man. The comfort of the user is key in ergonomic designs. Speech-based user interfaces like Automatic Speech Recognition (ASR) Services that use artificial intelligence offers truly hands-free, eyes free interface that has evaded us for too long. The paper examined the diverse innovations that manufacturers have used to ensure that they cater for the communication needs of the physically challenged persons in the society. Simplicity in design of ICT systems for the disabled enhances their usability. The paper covers text entry devices, pointing devices, switch access, automatic speech recognition, and web accessibility. Grounded theory methodology was used to guide collection and analysis of empirical data for this study. The study involved content analysis of existing literature from the manufacturers of computer systems and peripheral devices with a bias to those that target the ergonomics of the disabled. The study found out that technological innovations are today factoring in design and manufacture of computers for the disabled as evidenced by the like Braille keyboards, Microphone & voice recognition software, Loudspeaker & text reading software and Braille printer. Others are Mouth stick, Puff-suck switch, Tongue activated joystick, Eye-typer, Foot mouse and computer assessment software among others in order to communicate effectively.

Key Words: Artificial Intelligence, Automatic Speech Recognition, Ergonomics, Human Computer Interactions and Resistive Strain Injury.

S2014-21 Analysis of Changes in Settlement and their Implications in Kajiado County

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Abstract

Settlement changes have profound effects on natural resources, including direct habitat destruction, and obstruction of animal movement. Large population lives in urban areas, which are experiencing tremendous growth rates in terms of settlements. Settlements are communities where people live, ranging in size from a small number of dwellings grouped together to large cities. Kajiado County faces food insecurity, poverty and general natural resource degradation due to continuous increase in settlement growth. Remotely sensed imagery data from satellites have become important tools to assess vulnerability of urban areas and to grasp damage distribution they cause. This study applies remote sensing technique to assess the dynamics and impact of settlement patterns in Kajiado County, and to determine the driving forces of settlements and land use changes in the area of study using Landsat images for the years 1990 to 2011. Images were obtained and rectified using ERDAS software. Multispectral data was used to perform the supervised land cover classification to facilitate change detection and analysis. A spatially-explicit settlement growth model has been developed to quantify and visualize the potential implications of land use decisions, by modeling patterns of future human settlement and measuring their relative impacts. From the results, it is evident that continuous growth in human settlement increase pressure on natural resources. It is also observed that least detrimental impacts are from the growth scenario that emphasizes lower housing densities and a smaller human settlement footprint. Time-series analysis shows changes in land use/land cover management. Maps showing land use/ land cover changes are presented. Geospatial technologies are applicable in the development of spatial settlement growth model.

Key Words: Settlement change, GIS, Remote Sensing, natural resource, Land cover/land use changes.

S2014-22 Gis And Remote Sensing Support In Watershed Conservation And Management; Case study of the Upper Gucha Catchment – Kenya

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Abstract

Geospatial Information Systems (GIS) and Remote Sensing, and their capability to capture, store, manipulate and display data, have found great utility in the analyses of any phenomena with speed and accuracy anywhere on/above/below the earth surface. One such application is watershed conservation and management. This study demonstrates the role of Spatial technologies, in the identification, delineation of river channel network within watersheds, generation of Slope and Flow direction maps from Digital Elevation Models (DEMs), besides the analyses of impacts by human activities on land cover through land use practices within the upper Gucha watershed – a major contributor to the Lake Victoria catchment. With a population growth rate of 2.75% per annum and poverty level of 51% and average population density of 874.7 persons per km², this watershed is characterized with land fragmentation and clearing of primary vegetation within the river vallies and swamps for agricultural space. The methodology involved digital Contour Map preparation, by Geo-referencing and digitizing, DEM generation and watershed delineation. Slope map, Stream network and flow direction Maps of the watershed were generated as management tools. Using Satellite imageries of years 1990, 2000 and 2013, change detection was done. The results include Change Detection Map, a DEM, Slope Map and Flow direction map of the watershed for visualization of topographic characteristics of the watershed as tools for informed decision making by managers during conservation and management process. Conclusions appreciate and recognize the importance of spatial technologies in watershed conservation and management and recommend their use in developing watershed conservation and management tools.

Key Words: GIS, Remote Sensing, Watershed, Conservation, Management

S2014-24 Water Sanitation and Health in Arid and Semi-Arid Areas

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Abstract

Water is an important resource to humankind, animal kind and plants. As a natural resource, water is important therefore to all organisms in the environment. Water to be used in any way for domestic, must be clean or treated for good health. Thus inadequate access to safe drinking water, poor or lack of proper sanitation facilities and poor hygienic practices, will remain major obstacles for achieving better health standards. A recent survey conducted by world vision established that most rural communities in Kenya identify access to safe water as the main need affecting them. The survey complements findings from similar studies by government and other agencies which indicates that 60% of population do not have access to safe drinking water, while 49% lack basic sanitation facilities (World Vision Bullitin,2012)Poor sanitation facilities due to lack of clean water, lead to diseases like diarrhea, dysentery and cholera. The objective of the research is to study the real and better strategies to improve health and wellbeing of the Arid and Semi-Arid (ASALS)and all communities in Kenya by empowering them to embrace a culture of safe sanitation and hygiene when managing clean water supplies and as a consequence to improve health standards. The research will adapt analytical- survey method of empirical data

available in journals by various government and Non-government organizations (NGOs). The findings will be important to all people as the assurance to clean water and safe health. The drilling of new boreholes, shallow wells and protecting springs, all regions viable, will provide safe water communities at short distances from their homes especially in ASALS. It is concluded that most of water schemes initiated ASALS; collapse due to many challenges pertains to lack of pumping equipment, operation costs, maintenance and overall management. It is recommended, community members to establish water management committees to oversee the daily operations and maintenance of the clean water.

Key Words: Sanitation; Hygiene; Empower

S2014-25 Knowledge System of Land Use Potential (KSLUP) for Food Security among Pastoralists: A Case Study for Wajir County

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Abstract

Wajir County is classified as rangeland with regard to its land use. Despite the fact that the County has a large land mass cover; little research has been done to determine its land use potential. The study focused on knowledge system of land use potential(KSLUP) in Wajir County. It employed cross-sectional survey design. The target population was 661,941 persons belonging to 90,108 households out of which a sample 222 households was drawn. A questionnaire was used to collect primary data from the household heads. Collected data was analyzed using SPSS version 20 and excel version 2010. Results from data analysis showed that majority of the respondents had more goats and sheep, a few had camels, local poultry, cattle, bee hives and at least a donkey. Livestock production was the main source of income, followed by crop production. Other source of income included sales from tree products (gums/resins) and building materials. Communal land ownership was dominant in the county with results indicating that most of the respondent acquired land through self-proclamation/declaration. There were several challenges facing land use in the county including land grabbing, human-wildlife conflict, environmental degradation and livestock diseases among others. To improve the present land use, there was need to build the capacities of the pastoralists on management of rangelands, train on gums and resins production, provision of agricultural subsidies, construction of boreholes/dams for irrigation, control of wildlife menace, livestock disease surveillance, control of unplanned settlements and environmental conservation. The study also proposed policies to be formulated by county government to improve land use.

Key words: Land Potential Use, Knowledge System, Food Security, Pastoralists

S2014-26 Modeling of Malignant Tumor Using Finite Volume Time Domain

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Abstract

For a long time microwave engineers have dreamed of using non-ionizing electromagnetic waves to image the human body in order to detect cancer. Over the past several years, significant progress has been made towards making this dream a reality for breast cancer detection. In the next decade, microwave systems are likely to become viable diagnostic option for many women and men alike. More so than for any other cancers, breast tumors have electrical properties at microwave frequencies that are significantly different from those of healthy breast tissues. The breast can easily be accessed from outside, while internal organs are much less accessible. Normal breast tissue is also more translucent to microwaves than many other tissues, such as muscle or brain. This paper proposes a new methodology for analyzing malignant tumors. The methodology will be based on finite volume time domain (FVTD) modeling approach. In the past finite difference time domain modeling schemes have been used to detect tumors. However, though it is simple and has wide frequency coverage, its main drawback is that it is computationally intensive. To overcome this drawback finite volume time domain (FVTD) is proposed as a suitable modeling technique for the problem.

Keywords: Conformal microwave technology; finite difference time domain, malignant tumor; permittivity; conductivity; finite volume time domain

S2014-27 Molecular Modeling of Toxic Indole Derivatives from High Temperature Cooking

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Abstract

More than two decades ago, Japanese scientists discovered a new family of highly mutagenic compounds classified as heterocyclic aromatic amines from roasted meat and grilled Fish. This group of compounds will form the basis of this investigation from a theoretical perspective. In order to simulate high temperature cooking and explore the thermochemical properties of these compounds, high level quantum calculations were employed. Accordingly, the theoretical behaviour of indole derivatives; isoindazole, 1-methyl indole, 4,7-dimethyl isoindazole and carbazole were explored at a pressure of 1 atmosphere over a wide range of pyrolysis temperatures (323-923K) typically at temperature increments of 50 K. *Ab initio* analytical gradients at MP2 level of theory with 3-21G and 6-31++G(d,p) basis sets and Molecular

Mechanics (MM) with universal force field (UFF) from *Gaussian 03* computational platform were used for geometry optimization, internal energy calculations, molecular orbitals, and vibrational frequencies. It was observed the global minimum for isoindazole at 323 K was 75.80 kcal/mol whereas that of carbazole was 123.78 kcal/mol under similar conditions of pressure and temperature. The stability of these molecular compounds decreased with increase in pyrolysis temperature. To make decent conclusions on the potency of these indole derivatives (isoindazole, 1-methyl indole, 4,7-dimethyl isoindazole and carbazole) and their effect on human health, toxicity values were estimated using Quantitative Structural Activity Relationship (QSAR) method found in HypeChem computational software. Toxicity indices for isoindazole, 1-methyl indole, 4,7-dimethyl isoindazole and carbazole were -0.16, 0.01, 0.14 and -0.07 respectively, while those for their corresponding radicals were -0.12, -0.21, 0.19 and -0.17. These values point to highly hydrophilic species which indicate they are very toxic. The thermochemical, electronic, and toxicity properties of these compounds and their analog radicals will be presented. Additionally, theoretical NMR chemical shifts for the most toxic by-product of high temperature cooking are also reported.

Key Words: *Ab initio*, by-product, isoindole, pyrolysis, QSAR, toxicity

S2014-28 Multi-Agent Based Extension Support System for Horticulture

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Abstract

Most of the medium- and small-scale horticultural farmers rely on public extension service providers while large-scale farmers depend on private extension services. However, the current number of extension service providers is inadequate to meet the needs of horticultural farmers. HCDA offers limited specialized extension services for export crops and only in specific high-concentration areas. Consequently, high-potential regions and farmers who produce for the local market have not benefited from this service. The purpose of this paper is to address the extension service problem by identifying extension services information required in horticulture, to design and build the Multi agent based extension support system then test and evaluate the build multi agent based extension support system with farmers. The information needs and searches for the farmer are related to 6 stages which were identified as follows: (1) Deciding, (2) Seeding, (3) Planting, (4) Diseases, (5) Harvesting, packing and storing, and (6) Marketing. The stages were the bases for building the multi agent based extension support system for horticulture. The system uses multi agents to perform search on behalf of the farmers and gives results on the mobile phone. An agent oriented methodology –Prometheus was used in the analysis and design of the multi-agent based extension support system for horticulture. The implementation of the multi agents was carried out using JADE and JADE-LEAP agent development kit. This framework opens the way towards any kind of distributed multi-agent systems, in which farmer agents may be smoothly running on mobile devices and can communicate wirelessly with agents to access information on extension services. Test cases were run for the purpose of evaluating the

build prototype with farmers. Future improvements proposed are GIS, data mining and language functionalities.

Keywords: Multi-agent, Extension, Horticulture

S2014-29 Network Digital Forensic Framework for Managing Security Incidents in Organizations

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Abstract:

Network forensics deals with volatile, dynamic data, detection of anomalous traffic and identification of intrusions. All these advanced applications rely heavily on the networks. The health, structural integrity and security of networks are the most important factors which determine the reliable performance of networks. Security is needed in case of networks which maintain or transfer data belonging to a particular organization where as forensics deals with the usage of the evidence left after an attack to determine how the attack was carried out and what the attacker did. Most organizations have accepted and put in place security measures in securing information systems and information by implementing control measures such as firewall, intrusion detection systems, anti-virus and access control lists mechanism in protecting the systems from potential threats and intrusion from reports no system is guaranteed perfectly secured as security incidents still do persist. The digital security incidents have dramatically charged with emerging computer systems and network technologies. Digital evidence, both static and volatile is required for establishing the root cause of incidents which can be achieved through activity networks, internet activities, electronics mails and other portable devices. This is essential to investigator analyzing digital incidents as these act as additional information in the chain of evidence. It is therefore essential to evaluate the effectiveness of existing frameworks, techniques and tools, then develop viable framework alongside set of recommendation of security incidents incorporated in tracing, detecting and tolerating security incidents life sequence with the aim of safeguarding systems running services that contributes in their processing.

Keywords: Networks, Digital, Forensic, Frameworks, Security.

S2014-30 Optimized high speed SMS based alarm system for home security

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Abstract

Technological advances of recent years have facilitated the use of embedded systems. They are part of our everyday life. Thanks to them, electronic devices are increasingly present in our lives in many forms. Home security has been a major issue where crime is increasing and everybody wants to take proper measures to prevent intrusion. This paper mainly focuses on the controlling of home security remotely and providing security when the user is away from the place. The system is SMS based and uses wireless technology to transform the standards of living. This system provides ideal solution to the problems faced by home owners in daily life. The system is wireless therefore more adaptable and cost-effective. The optimized high speed SMS based alarm system provides security against intrusion using SMS. The system uses GSM technology thus providing ubiquitous access to the system for security.

Keywords: Short Message Service (SMS), Global System for Mobile communication (GSM), ubiquitous access and Automation.

S2014-31 Performance Analysis of FIFO, Priority and Weighted-Fair Packet Queuing Mechanisms in Manets

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Abstract: Mobile Ad Hoc Networks (MANETs) require prudent resource allocations especially in scheduling mechanisms that manage buffering of packets during waiting time. Various scheduling algorithms may be implemented to govern packet transmission and control packet loss hence managing the Quality of Service (QoS). Such mechanisms include first-in-first-out (FIFO), priority queuing (PQ), and weighted-fair queuing (WFQ). In this paper, a comparison is made between use of FIFO, WFQ and PQ mechanisms in a mixed traffic scenario (HTTP and FTP and VoIP applications). PQ is implemented on the basis of packet Type of Service (ToS), with VoIP data packets being given the upper hand. Opnet simulator is utilized in this paper. The study has been carried out on some issues like: Traffic dropped Traffic Received and packet end to end delay and the simulation results shows that WFQ technique has a better-quality than the other techniques.

Keywords— FIFO queue, Priority queue, Weighted-fair Queue, QoS,

S2014-32 Potential of Lubricating Oil (MGALO) and organic Bio-fertilizer production from Marine Green Algae (Patent Number, KE/UM/2012/00295)

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Abstract

Green seaweed *Euchuma rhodophyta*, *Ulva lactuca* and *Enteromorpha flexuosa* harvested from the Indian Ocean (Kenya) were characterized as feedstock for the production of lubricating oil and fertilizer. *Euchuma rhodophyta* had the highest oil yields of 10.5% (g/g) followed by *Ulva lactuca* with 6.3% (g/g) and *Enteromorpha flexuosa* with 3% (g/g) from 100 g of algal biomass respectively. The average kinematic viscosity from all the three algae was 32 cst at 40°C suggesting a potential industrial application of the oils as lubricating base stock. Oil from the three marine algae had similar densities of 0.9132, 0.9136 and 0.9151 kg/L at 20°C though the oils were denser than the stipulated range of Shell Tellus Lubricating oils ranging between 0.8850kg/L-0.870kg/L. After oil extraction, the biomass was further converted into bio-fertilizer containing 10% potassium which is absent from many commercial fertilizers and rich in nitrogen (10%) and phosphorus (8%). We conclude that the three marine algae are potential source of bio-energy and bio-fertilizer and that industrial processing of the algae will be of significant economic and environmental advantage.

Key words: Algae, Bio-fertilizer, Lubricating oil.

S2014-33 Redirecting the Wheels of Natural Progression: Synthetic Biology and the African Biotechnology Revolution

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Abstract.

In human evolution survival in the natural world has always been determined by the successful manipulation of the natural systems for the creation of useful products or conditions, over time humans have devised various technologies to exploit the natural environment. The potential to create biological systems and organisms that do not occur in nature, has increasingly been gaining favor as a possible solution to meeting countless human needs in the modern world. For this reasons modern biotechnology has been replaced by a new field known as synthetic biology, synthetic biology is broadly understood as the deliberate design of novel biological systems and organisms that draws on principles elucidated by biologists, chemists, physicists and engineers, in essence it is about redesigning life'. The main aim of this work was to review the state of synthetic biology in Africa in contrast with the trends of both conventional and modern biotechnologies and to give highlights on the future novelty of synthetic biology. The study showed that synthetic biology in Africa has not yet fully come of age, and that plant biotechnology has been extensively adopted in the continent. The potentials which can be achieved with this technology are unimaginable and can bring about great progress in developing

nations. However greater political initiatives and government policies needs to be instigated if the advantages of this technology are to be fully felt in Africa, this thus calls for further research and investments into the technology.

Key words: synthetic biology, modern biotechnology, plant biotechnology, exploitation of natural systems and design of organisms.

S2013-34 Efforts towards Increased Forest Cover as a Measure to Mitigate Effects of Climate Change

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Greetings,

Attached is the invitation letter as requested

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Abstract

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

S2014-36 An Evaluation Of The Community's Resilience In Coping With The Global Climatic Change: Case Of Mwala District, Machakos County

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Abstract

The need for communities to develop resilient strategies to adapt and cope with the phenomenon of global changing climatic conditions has already gained currency. The communities are thus accelerating diverse strategies to mitigate their susceptibility and increasing their enhancement of their resilience to cope with the harsh conditions of climatic change like droughts, floods, or heat waves. Notwithstanding the fact that adaptation must occur at the community level, there are issues that need critical investigation with a view of enhancing the development of effective community's strategies at the community level so as to cope with the global climatic change. The study will investigate how communities' coping mechanisms with the drastic climatic change emanating from the global warming; three research questions:-

1. To what extent is the community aware of the effects of the global climatic change?
2. What are the effects of the global climatic change to the community socio-economic life?
3. What strategies is the community putting in place to mitigate the effects of climatic change?

The nature of the problem being tackled by this paper, a descriptive, explorative and analytical design will be adopted. Because there is no standardized approach for coping with the climatic change, the paper will add value if the community's aspirations and practices are described, explored, and analyzed in order to understand community's resilience.

Key Words: Global warming, climatic change, resilience, development, community, and indigenous.

S2014-37 Smart phone applications usage and its impacts on university students learning in Tanzania

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The increasing ability of smart phones are standing as the Generation Y's preferred technology gadget learning tool, supplementing conventional PCs and hard copy books in physical four-walled libraries, especially among university students. This study analyses the usage of smart phone applications and in particular social networking applications amongst smart phone users in universities and how such usage helps in their day-to-day learning activities . Questionnaires were derived from the literature and used to assess the frequency and intensity of application usage. The data analyze by looking at key applications and frequency/intensity of usage and

whether such use was educational or not. It was found that the students that were questioned in three universities in Tanzania spend an average of six hours per day on their smart phones interacting with others via social networks and remain online for about 18 hours per day. The students that were sampled preferred to communicate using Whatsapp and daily bulk SMS's package provided by mobile phone networks. These students appear to use SMS for close friends only and hardly make phone calls; possibly due to the high cost of calls especially when you call a subscriber from a different network. Students use Social Networks especially Whatsapp, Facebook and Instagram in order to update their profiles, chat with friends, and look at their friends' profiles and statuses. The study revealed that most of the students spend much of their time on smart phones to download music, playing games and getting updates on sports especially European football leagues. Therefore, this study conclude that if smart phone applications could be effectively utilized would become powerful learning tool to help students in their day-to-day learning activities such as writing assignments, projects researches and engaging in academic discussions.

Keywords: learning, social networks, students, smart phones, universities

S2014-38 Solving Maxwell Equations for using Finite Volume Time Domain

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Abstract

Existing numerical methods for the solution of the time domain Maxwell equations often rely on explicit time integration schemes and are therefore constrained by a stability condition that can be very restrictive on highly refined or unstructured meshes. This paper aims to investigate the applicability of finite volume time domain on unstructured meshes. This paper introduces some of the mathematical properties of Finite Volume time domain method. We also prove that finite volume time domain method globally conserves a discrete form of electromagnetic energy if the initial boundary condition is used, and we show that discrete electromagnetic energy is decreasing. In the one dimension study we prove that the matrix operator characterizing the finite volume time domain method is invertible. We conclude by giving preliminary numerical results on a test case in order to validate the proposed method.

Keywords: Time domain Maxwell equations, time integration schemes, finite volume time domain

S2014-39 The abundance of Lactic acid bacteria in the gastrointestinal tract of Lake Victoria Nile Perch

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Abstract

The high losses resulting from spoilage and cross contamination by pathogenic microbes in the world's largest fresh water fishery (L. Victoria) requires processing techniques like bio preservation that retains the natural characteristics of the product. There is limited information on the abundance of Lactic acid Bacteria in the guts of Nile perch that would be important in enhancing organic processing of its products. The aim of the study was to determine the presence and abundance of lactic acid bacteria from gastrointestinal tracts of *Latesniloticus* fish with the specific objective of determining fish size effect on LAB population. Three different sizes of fish (400-999, 1000-1999 and 2000 grams up) were randomly sampled from selected landing sites of L. Victoria for two seasons. A total of 96 fish samples were analyzed and LAB counts enumerated. The average weight of small fish sampled during the wet season was 647.5g that gave an average of 9.2×10^3 cfu/g; medium averaging 1443.8g had 2.1×10^4 cfu/g and big averaging 2782g had 4.9×10^4 cfu/g. In the dry spells, the small fish averaging 593.8g had 6.7×10^3 cfu/g medium averaging 1329.4g had 1.7×10^4 cfu/g and big averaging 2796.9g had 3.4×10^4 cfu/g. The means of counts of LABs are significantly different for the three sizes tested, with the big size giving the highest followed by medium and small respectively. The means of counts of LABs are insignificantly different for the eight sites tested. The mean of counts of LABs are significantly different for the wet and dry seasons tested. In conclusion, this study showed availability of lactic acid bacteria in the gut of L. Victoria Nile perch and can be used as a good source of potential bio preservative.

Keywords: Lactic Acid Bacteria, Nile Perch

S2014-40 The Impact of a Positive HIV Status of the Household Head on the Nutritional Status of a Household. Trends and Issues

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Abstract:

This article examines the trends and impact of the positive HIV status of a household head on the nutritional status of a household, especially in the developing countries. An improved dietary management, using readily available and affordable foodstuff in these communities is offered in an attempt to address this matter, an attempt to highlight the plight of those who are not able to afford the foods /food supplement. Worldwide HIV/AIDS has an enormous effect on households, among them are: increased medical expenditures, on a decreased income and food insecurity. This problem is magnified when the infected person is the breadwinner. Absenteeism from work due to poor health as the disease progresses, affects household income. Consequently affected

households are poorer than they would be without HIV/AIDS. Malnutrition, wasting and food insecurity of the household members is inevitable. Despite the effectiveness of HAART, there is evidence that HIV is still an important co-morbidity in many patients. Studies show that nutrition interventions and supplementation can improve and prolong lives of PLHIV. The work is aimed at examining factors influencing food security in the affected household, the coping strategies they employ and their socioeconomic characteristics. The article focuses on the socioeconomic impact of positive HIV status of a household head on the household food security and their coping strategies. The work is important in addressing the socioeconomic effects on the nutritional status of a household when the head of the household is positive is imperative, establishing and maintaining appropriate legislation on food policies, fortification and subsidising supplementation, nutrition education and promoting small income generating activities and basic economic literacy among affected households cannot be over emphasized.

S2014-41 The Prevalence of Overweight, Obesity, Diagnosed Diabetes Mellitus and Hypertension in The Swahili Community of Old Town and Kisauni Districts in Mombasa County

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Abstract

Overweight and obesity are now on the rise in low and middle-income countries, particularly in urban settings. Urbanization, associated with changing dietary patterns and less physical activity is occurring across Sub-Saharan Africa countries. The two conditions are major risk factors for a number of chronic lifestyle diseases. The growing prevalence of type 2 diabetes, hypertension, cardiovascular diseases and some cancers is tied to excess weight. The study aimed at determining the prevalence and association between overweight, obesity and diagnosed diabetes and hypertension in Kisauni and Old Town districts. A cross-sectional study design was administered. Systematic sampling was used to randomly pick 207 households. Data was collected on diagnosed diabetes and hypertension. Weight, height and waist circumference were taken and Body Mass Index (BMI) calculated. Data analysis was done using the Statistical Package for the Social Sciences version 11.5 computer software. Results indicate that the prevalence of overweight and obesity was 48.48% and 35.86% respectively in Kisauni district and 37.55% and 52.32% respectively in Old Town. About 11.1% and 39.9% of the Swahili community in Kisauni district had diagnosed diabetes and hypertension respectively whereas 14.8% and 44.0% of the community in Old town had diagnosed diabetes and hypertension respectively. Obesity in the Swahili community as assessed by BMI and waist circumference was associated with diabetes and hypertension ($p < 0.05$, 95% C.I). Obesity in both Kisauni and Old Town districts was associated with diabetes [OR, 5.87; 95% CI, 2.17, 15.80] [OR, 3.20; 95% CI, 1.37, 7.50]. Therefore screening for obesity followed by health education of obese persons for weight reduction should be done for early prevention of comorbidities like hypertension and diabetes.

Key words: Overweight, Obesity, Diagnosed diabetes, Diagnosed hypertension, BMI

S2014-42 Physico-chemical properties of clays used for cosmetic purposes in Kenya

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Abstract

The use of clay in cosmetic applications has been there for a very long time. They are used for cleansing the skin, emulsification, beauty, adsorption, detoxification, UV radiation protection, ion exchange with the skin and trans-dermal nutrient supplementation of elements such as calcium, iron, magnesium and potassium. The ability of clays to perform these various functions are influenced by their colour, particle size, specific surface area, cation exchange capacity (CEC) and pH value of the clay. In this study, clay soils used in Kenya were studied and analyzed for their Physico-chemical properties. Twelve samples were collected randomly from Narok, Bomet, and Bungoma counties and standard laboratory methods used to determine particle size distribution, texture, pH and clay minerals present. The study found that the pH values ranged between 4.4 and 6.8. Majority of the samples had a higher sand percentage composition and in addition most were clay loam soil in texture. A total of fifteen clay minerals were present. The acidic nature of the clays may ensure low population of skin bacterial flora. The high sand percentage may cause abrasion and damage to the user skin. The presence of Kaolin in most clays can play a major role in UV- protection. The physico-chemical properties can thus influence cleansing, sunscreen and body beautification roles for which the clay soils are used.

Key words: Clay, Clay minerals, pH, Sunscreen

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S2014-43 To Consume or not to Consume Traditional Fermented Milk (*Mursik*) of Kenya?

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Abstract

Traditional Kenyan fermented milk, *mursik* product forming part of a range of fermented diets in Kenya that have been used for many eras among the inhabitants and are the main source of possibly probiotic bacteria. Probiotics are alive and nonpathogenic microbes that have constructive effects on their host's health. In this study a total 16 lactic acid bacteria strain were isolated by preliminary screening in MRS. The second step was in vitro test and determining their potential as probiotic. Therefore, resistance to low pH 2.5 and evaluation of 0.3 % bile salt tolerance was performed. Results showed that all isolates were able to grow at low pH and bile salt (0.3%). Identification of isolates was followed by biochemical and physiological tests and 16 *Lactobacillus* isolates were located in four groups including *Lactobacillus plantarum*,

Lactobacillus fermentum, *Lactobacillus brevis* and *Lactobacillus casei*. Finally, antimicrobial activity of the four different *Lactobacillus* (according to biochemical and morphological tests) were tested against three pathogenic bacteria including *Salmonella enteritica* (ATCC 13076), *E. coli* (ATCC 25922) and *Staphylococcus aureus* (Isolate) by agar disc diffusion method. All of tested isolates showed inhibitory zone against pathogenic bacteria. In conclusion, present study showed that traditional dairy products of Bomet County can be used as a good source of possibly probiotic bacteria.

Keywords: *Mursik, Probiotic, Lactic acid bacteria, Antibacterial activity, Fermented milk*

S2014-44 Toxicity and efficacy of aqueous crude extracts from *Allium sativum*, *Callistemon citrinus* and *Moringa stenopetala* against *L. major*

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Abstract

Cutaneous leishmaniasis (CL) treatment involves pentavalent antimonials, amphotericin B, pentamidine, miltefosine among others. These drugs are toxic, costly, and require prolonged use. CL is a protozoan skin infection which may lead to disfiguring and stigmatization. In Kenya, CL is common in Baringo County where it is caused by *Leishmania major* and transmitted by infected female phlebotomine sand fly. Leishmaniasis are common in poverty stricken areas where victims opt for local herbal therapies. Herbs used haven't been tested scientifically to verify their toxicity and efficacy. The current study determines *in vitro* toxicity and *in vivo* efficacy of aqueous crude extracts of *Moringa stenopetala*, *Callistemon citrinus*, and *Allium sativum* against *L. major*. The IC₅₀ of aqueous extracts against promastigotes ranged from 297µg/ml to 575µg/ml compared to Pentostam and liposomal amphotericin B with IC₅₀ of 0.26µg/ml and 0.82µg/ml respectively. The viability of promastigotes upon exposure to extracts ranged from 52.55% to 60.57%. Similarly the IC₅₀ of extracts against vero cells ranged between 467µg/ml to 2105µg/ml compared to 108µg/ml and 60µg/ml for pentostam and liposomal amphotericin B respectively. Orally administered *A. sativum* reduced *L. major* caused footpad lesions significantly (P < 0.05) when compared to control PBS. The efficacy of oral *C. citrinus* extracts (B) in reducing amastigotes in spleens of infected BALB/c mice was 82.99%, followed by oral *M. stenopetala* (A) at 66.96% and oral *A. sativum* (C) at 60.37% compared to pentostam and liposomal amphotericin B at 66.40% and 60.62% respectively. The difference between the mean total LDUs for aqueous oral *C. citrinus* extracts and control oral PBS was significant (P =

0.017). It was concluded that crude aqueous extracts of *A. sativum*, *M. stenopetala*, and *C. citrinus* show antileishmanial activity at low toxicity. Inclusion of garlic and moringa in the diets of people in leishmaniasis foci should be emphasized.

S2014-45 Traffic Analysis In The Use Of Cell Zooming For Outage Compensation

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Abstract

Everything is going mobile. This has changed how people behave and their demand for connectivity is anywhere and anytime. This demand is driven by the fact that essential services have moved from mere telecommunication to very crucial services like money transfer services and the fact that the work from home generation give critical services like surgery via mobile communication. However, terrorism threats, vandalism, environmental disasters and general failures are also on the increase and these threaten the availability of mobile services anytime and everywhere. It is thus critical that measures are taken to ensure availability of service amid these threats. Cell zooming promises to provide a self healing solution that would ensure the demand for service is anytime and anywhere is sustained. A factor key to the success of this implementation is the traffic. This paper investigates the telecommunication traffic of a selected region to map the effect it has on the capacity. The study uses Microsoft Excel to analyze actual traffic statistics. Preliminary results revealed a busy hour of 7pm which is in line with global observation of an elevated desire to communicate between 5pm and 9pm. Another observation is that cell zooming can be implemented for 22 hours of a day without requiring a reserve capacity in the system. Further research will seek to break through the resources limitations and recommend an acceptable self healing design that can be adopted by operators as a step towards Self Organizing Networks.

Keywords: Cell Zooming, Outage compensation, Self-Healing, Self-Organizing Networks (SON), Radio Network Planning, Mobile Traffic Analysis, Erlang B

S2014-46 Using GIS to select ideal sites for Municipal Wastes Transfer Station: A case study of Embu Municipality

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Abstract

The uncontrolled rise in volume and types of both solid and hazardous waste due to economic growth, urbanization and industrialization, is becoming a real challenge to effective and sustainable management of waste at the local and National government levels. In Kenya, many municipal councils continue to face uphill challenges in managing their waste especially Waste

volume reduction and revenue generation from wastes related activities. Therefore, if most Municipal Solid waste could be segregated and recycled, a significant amount of waste could be diverted from dumpsites and converted into revenue generation material. The study sought to identify suitable areas for the location of waste transfer and recovery facilities as well as ways of improving the compilation of waste statistics. The Methodology used in this study included data collection through interviews and use of questionnaire and GIS based analysis. In this particular case study, Geographic information system was used to analyse Population, land use, roads and existing waste receptacles layers through reclassification and overlay to get a map of suitable areas . From this research GIS was able to identify Kangaru, Blue valley, Majengo and Itabua Wards as having suitable places to construct the waste transfer centers in an attempt to improve garbage storage, segregation and recovery .These wards had good access roads, ample land space and lied on the suburbs of the town.

The use of Geo-spatial information technology in identification of the suitable sites as well as manipulating waste statistics serve as a breakthrough since it could analyze complex environmental, social and economic variables associated with waste generation, collection and disposal in an integrated approach. Geo-Spatial Information technologies like GIS should therefore be adopted and used as an Environmentally Sound technology for effective Waste management.

Key words: Waste Transfer Stations, Geographic Information Systems (GIS), Environmentally Sound Technology

S2014-48 Genetic diversity and symbiotic efficiency of root nodule bacteria associated with Bambara groundnuts (*Vigna subterranea* L. Verdc) in the drier parts of Lake Victoria basin.

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Abstract

Bambara groundnut (*Vigna subterranea* L. Verdc) is a drought tolerant and nutritionally important legume crop that can form symbiosis with root nodule bacteria fixing nitrogen into the soil. Currently, there is scanty information on diverse strains of bacteria that nodulate bambara groundnuts in the soils of the drier parts Lake Victoria basin. The genetic diversity of rhizobium bacteria that nodulate bambara groundnuts from four agro-ecological zones and their symbiotic efficiency was determined. Morphological evaluation through the plant host infection technique on Yeast Mannitol Extract Agar was done. Molecular characterization on 150 pure isolates was done at ILRI-BecA Hub with PCR primers targeting 16S rRNA, *nifH*, *nodC*, *recA* and *atpD* genes. Morphological data revealed three distinct groups with (69.3%) as average growth rates, 28% as fast growers while 2.6% slowest. 65.3% showed reaction in acid media and the rest in alkaline conditions. Textures were non-elastic (43.3%), elastic (28%) and buttery (8.6%). 74.6 % had a dome colony shape while 25.3% were flattened. 16S rRNA genes gave three distinct

genera including *Bradyrhizobium*, *Rhizobium* and *Ensifer/Sinorhizobium* at identity values of 96 to 100% although there was low discriminatory power at species level. *nifH*, *nodA* and *nodC* gene sequences showed 99-100% sequence identity with *Rhizobium etli* strain HBR2, *Rhizobium vallis* strain CCBAU 656447 and *Rhizobium sp* strains. The *nifH* sequences were submitted to the NCBI gene bank with accession numbers 1662097 BAM 1-8 KF677015-22. Clustering based on the *recA* and *atpD* sequences followed similar topology to symbiotic genes and 16S rRNA genes. Analysis of symbiotic efficiency of the isolates showed all strains characterized formed effective nodules on bambara groundnuts and other legume. The findings of this study reflect a high diversity of rhizobium bacteria which nodulate bambara groundnuts which should be utilized to enhance crop productivity and to improve databases on indigenous symbiotic populations.

S2014-49 Assessing and monitoring agriculture crop production in Machakos County

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Abstract

Most parts of Kenya are semi-arid/arid with scanty rainfall amounts irregularly distributed. Population pressure in high potential areas has pushed human settlement to fragile ecosystems. The objective of this study is to define extent of agricultural land, assess crop condition, Identify influence of rainfall distribution on crop production and define soil characteristics related to crop production in Machakos County. The methodology is based on satellite data processing. Landsat ETM+ is used to classify Land Use Land Cover and derive agricultural land extent. SPOT VEGETATION NDVI is used to assess and do a time series analysis of biomass health and vigor for the cropping season in Machakos. FEWSNET RFE data was used to compute cumulative rainfall amount and mean for the growing season. Soil characteristics were derived from the HWSO data. The Analysis revealed that Agriculture occupies 64% of the total land mass, and most land in high potential areas of the district is under agricultural production. During March 2011- September 2011 the region received total rainfall of 81-250mm. Crop condition in 2010 was better than 2011 agronomic season, this can be attributed to decline in moisture content and nutrients. The soils in the region are characterized by low water holding capacity and low organic matters. Irrigation and Water harvesting mechanisms need to be put in place. Sustainable agriculture e.g. crop rotation can be put in place to boost agriculture.

Keywords: Agriculture, GIS, Remote Sensing, Crop production

S2014-50 Clonal variations in the oil content and physico-chemical parameters of Kenyan tea (*Camellia sinensis*) seed oil

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Abstract

Tea is widely grown world over for its leaves, which undergo different manufacture processes resulting in different types of tea products viz., green, oolong, black, white, brick tea among others. Kenya predominantly produces black cut, tear and curl (CTC) tea, over 95% of which is sold in bulk in the export market. However, in the recent years, the world tea prices have declined, hence diminishing returns to the tea farmers. To solve this challenge, a multidisciplinary approach has been adopted by Kenyan tea industry stakeholders, value-addition and product diversification forming key issues currently being addressed. In light of these, a study was carried out to determine the physico-chemical properties of tea seed oil extracted from seeds of selected Kenyan tea clones. The oil was extracted by solvent extraction using a Soxhlet extractor with hexane as the solvent. The percent oil yield, iodine value, saponification value, peroxide value, free fatty acids, total polyphenols and antioxidant activity were determined. The mean oil yield was 21%, whereas the iodine value, peroxide value, saponification value, free fatty acids and total polyphenols and were 86 to 91 g I₂/100 g, < 3.5 meq O₂/kg, 182 to 187 mg KOH/g, < 1.5% oleic acid and 0.036 to 0.043 mg/L gallic acid respectively. Moreover, an antioxidant activity of between 14 to 21% 2,2-diphenyl-1-picrylhydrazyl (DPPH) scavenging activity was obtained. Indeed, tea seed oil is relatively stable, healthy and can be an important dietary source of natural antioxidants.

S2014-51 Community Response to and Nature of Human-wildlife Conflicts in Amboseli Ecosystem, Kenya

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Abstract

In the Amboseli Ecosystem, it is apparent that land tenure and use changes are occurring at a very fast rate due the dynamics of population and economic issues. Land tenure is moving away from communal group ranches towards privatized individual parcels. Land use is changing from pastoralism to agriculture. These changes alongside population increase and climate change have drastically increasing human-wildlife conflicts in the area. The study was done in order to examine the nature and occurrence of land changes, subsequent effects on human conflict and resolution mechanisms. The study was a survey type in which over one hundred pastoralists and farmers were interviewed in Kimana and Mbirikani group ranches. The findings revealed an increase in subdivision of land and agricultural practices, which in turn aggravated human-wildlife conflicts. Methods currently used to prevent conflicts were fires, making noise, and night guarding which were not very effective. Although most people continued to adopt a positive attitude towards wildlife, a majority of the population were unsatisfied with KWS and

their contribution to mitigating wildlife conflicts. Due to the lack of KWS response to the needs of the people regarding wildlife conflicts, the study recommends solutions to include a community funded electric fence, guard dogs, and the community taking shifts for guarding. KWS should implement Community Based Natural Resources Management Approaches, incentive and insurance programs and more aggressive measures such as relocation of people, trans-location of animals, and sustainable hunting strategies.

Key Words: Land use, human-wildlife conflict, KWS

S2014-52 Computational Modeling of Nicotine from Tobacco Burning and Mainstream Cigarette Smoking

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Abstract

The formation and emission of toxic by-products from tobacco at various combustion temperatures are a major health concern due to the associated health diseases such as cardiac arrest, stroke, mental illnesses, and lung cancer. Consequently, this paper will describe the quantum mechanical and thermodynamic characteristics of nicotine; a major alkaloid in tobacco which is known to cause adverse clinical effects. To mimic actual cigarette smoking conditions, computational calculations were conducted between 100 °C and 950 °C at 1 atmosphere pressure using three levels of theoretical methods; Density Functional theory (DFT), Hartree –Fock with 3-21G and 6-31++G(d,p) basis sets and Molecular Mechanics (MM) with Assisted model building with energy refinement (Amber) force field. Gaussian 03 computational package was used to perform thermochemical calculations, vibrational frequencies, and electronic properties of nicotine. At room temperature (298 K) using DFT/B3LYP analytical gradient with 6-31++(d,p) polarized basis set, the global minima of nicotine was found to be 149.625kcal/mol while at 950 °C, it had a minimum energy of 231.775 kcal/mol. The toxicity index of nicotine was estimated using Quantitative Structural Activity relationship (QSAR) technique found in HyperChem computational platform. The estimated toxicity indices for nicotine and its corresponding radical were 0.22 and 0.74 respectively. These values suggest that nicotine and its respective radical are liophilic. Liophilicity correlates with the degree of toxicity of a compound and therefore nicotine is not only a relaxant as widely reported in literature but also toxic. To complement theoretical studies of nicotine, experimental data showing the yield distribution of nicotine from 300-700 °C has been presented. The experimental results show that the yield of nicotine reached a maximum at about 500 °C. Detailed discussion on the clinical effects as well as the thermochemical properties of nicotine from tobacco smoke has been presented.

Key Words: clinical effects, DFT, Gaussian, HyperChem, liophilicity, yield

S2014-54 Impact of Mobility dynamics in Resource Allocation in Femtocell Network

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Abstract

Mobile communication dynamics such as user connection considering variation in time of their positions, demands as well as network load become a barrier to a successful deployment of femtocell network. In this paper, a Mobility-aware Femtocell Cluster-based Resource Allocation (M-FCRA) scheme is presented. The main aim is to incorporate user mobility dynamics and study its impact in cluster based femtocell network while minimizing the maximum gap between the required and allocated resource blocks and at the same time maintaining the required quality of service (QoS). M-FCRA algorithm is analyzed and explained. 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. The M-FCRA approach formulates the frequency/time resources allocation mathematically as a Min-Max optimization problem. A network simulator was used to simulate and analyze the scheme. Simulated results of Throughput Satisfactory Rate (TSR) at 5 dB, 10 dB, 15 dB and 20 dB Signal to Interference and Noise Ratio (SINR) and convergence time were then presented. Based on the simulated results, M-FCRA outperformed femtocell cluster based resource allocation scheme (FCRA) which does not consider user mobility in terms of TSR by about 10% and convergence time by 0.003 seconds. M-FCRA showed a good improvement despite variations in propagation path loss and handover due to mobility of users.

Keywords: femtocell, user mobility, resource allocation, clustering, quality of service.

S2014-55 Improvement of area accuracy in general boundary areas in Kenya: Case study of Juja – Kiambu County

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Abstract

Land ownership in the vast Kenyan Trust land is through the process of Land adjudication. The Preliminary Index Diagrams (PIDs) are the official map documents that together with adjudication records constitute the adjudication register that forms the basis for determination and registration of interests and rights over land. The PIDs are produced from enlarged, marked and un-rectified aerial photographs; as a result they contain distortions to parcel area which more than often is a source of land disputes, especially in resolving the gap between area contained in the title deeds and the actual parcel area on the ground. Generally, the uncertainty in PID area is about 20% of the actual area. We propose a procedure that can be used to reduce large errors in PIDs by comparing ground survey and PID areas in Juja. To achieve the objectives of this study, PIDs of 31 large plots in Juja were prepared from un-rectified aerial photographs. The area of

each parcel was measured in the usual way, using planimeter. Ground surveyed areas for the same parcels within the area of study were obtained from existing survey plans, normally referred to as folio references (F/Rs), and also through ground survey on parcels without F/Rs. The root mean square of the differences between PIDs and ground survey (F/Rs) areas was ± 14.63 hectares. *The distortions increased with increase in areal size. A conversion equation was developed to reduce areal errors. Using the conversion equation on PID areas, the root mean square of the differences reduced from ± 14.63 to ± 2.95 hectares, representing an improvement of 80%. The correction equation obtained can be used to obtain corrected parcel areas to facilitate accurate valuation of land parcels in the PID areas. This technique is simple because it requires only PID areas and it works well.*

S2014-56 Land Use Land Cover Changes and their Effects on Food Security: A Case Study of Kiambu County – Kenya

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Abstract

In the last four decades the emergence of new technologies and effects of rapid population growth around the globe have necessitated a tremendous shift by managers and planners on how to tackle land use and land cover (LULC) changes. Geospatial technologies have been used extensively in many areas of the world for generating valuable information on the forest cover, vegetation type, land use change detection and general environmental monitoring. Kiambu County is one of the most affected counties in Kenya by LULC changes due to its proximity to the capital city (Nairobi), good climate, fertile soils and improved infrastructure. This paper analyses the effects of LULC change on food security in Kiambu County and determines the main drivers of LULC changes using geospatial technologies. Landsat Thematic Mapper (TM) and Enhanced Thematic Mapper plus (ETM+) satellite images together with other data-sets were used. Satellite images for the years; 1984, 1993, 2002 and 2013 were applied in the time-series analysis of LULC. Digital image analysis was carried out through supervised classification using ERDAS Imagine 2011 by defining the training sites on the respective images. The classes mapped were agricultural land, forests, built-area/urban, water body, wet land, grassland and bare land/rock area. The overall accuracy was in the range of 89.70% to 90.71%. The results obtained showed that Agricultural land reduced over the whole period of study from 39.69% to 15.75% which is an indication that the County is food insecure considering that the population also grew at similar rates. It is also evident that the built-area/urban increased tremendously over the same period, from 1.88% to 33.50%, showing high demand for houses. A decrease in grassland, Forest, water body and Bare-land/Rocky areas was also observed. The application of geospatial technologies to analyze LULC and related effects was clearly demonstrated.

S2014-57 Management of Crime using Geographic Information Systems and Remote Sensing in Northern Kenya: A Case Study of Samburu County

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Abstract

Management of Crime and sustainability of meaningful security is a key to economic growth and development in Northern Kenya. Recurrence of violent crime in Samburu County has called for a careful examination of pre-existing security parameters in the region. This study explores the use of Geographic Information Systems (GIS) and Remote Sensing to manage crime in Samburu County. The methodology involved analysis of existing police stations in relation to crime distribution to determine optimal locations for police stations to facilitate crime management in the study area. Road network analysis is carried out to determine correlation between crime distribution and road network. The correlation is then used to determine optimal routes for faster response to crime. Slope analysis is performed to determine optimal locations for telecommunication masts, to facilitate faster crime reporting and response to crime related distress. Development of a web based application for crime reporting and analysis is also considered. Results from this study indicate incongruence between the location of police stations and spatial crime distribution in Samburu Central and Samburu North districts. Slope analysis of telecommunication network reveals that vast areas receive poor connectivity. Re-positioning of present telecommunication masts in Tuum, Parkati, Ngilai and Kisima locations will greatly enhance management of crime in this region. Road networks analysis shows that the present road design especially in Samburu East and Samburu North districts, partially facilitate occurrence of crime while at the same time deterring crime management. The proposed readjustments are in Lerata and Uaso Rogai locations. The use of a Web-based system to improve police response and provide a more and accurate platform for crime analysis is demonstrated. We present detailed maps showing optimal locations for police stations, road networks and telecommunication masts in the area of study.

S2014-58 Molecular Modeling of Toxic Indole Derivatives from High Temperature Cooking

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Abstract

More than two decades ago, Japanese scientists discovered a new family of highly mutagenic compounds classified as heterocyclic aromatic amines from roasted meat and grilled Fish. This

group of compounds will form the basis of this investigation from a theoretical perspective. In order to simulate high temperature cooking, quantum calculations were employed. Accordingly, the theoretical behaviour of indole derivatives; isoindazole, 1-methyl indole, 4,7-dimethyl isoindazole and carbazole were explored at a pressure of 1 atmosphere over a wide range of pyrolysis temperatures (323-923 K) typically at temperature increments of 50 K. Ab initio analytical gradients at MP2 level of theory with 3-21G and 6-31++G(d,p) basis sets and Molecular Mechanics (MM) with universal force field (UFF) from Gaussian 03 computational platform were used for geometry optimization, internal energy calculations, molecular orbitals, and vibrational frequencies. It was observed the global minimum for isoindazole at 323 K was 75.80 kcal/mol whereas that of carbazole was 123.78 kcal/mol under similar conditions of pressure and temperature. The stability of these molecular compounds decreased with increase in pyrolysis temperature. To make decent conclusions on the potency of these indole derivatives (isoindazole, 1-methyl indole, 4,7-dimethyl isoindazole and carbazole) and their effect on human health, toxicity values were estimated using Quantitative Structural Activity Relationship (QSAR) method found in HypeChem computational software. Toxicity indices for isoindazole, 1-methyl indole, 4,7-dimethyl isoindazole and carbazole were -0.16, 0.01, 0.14 and -0.07 respectively, while those for their corresponding radicals were -0.12, -0.21, 0.19 and -0.17. These values point to highly hydrophilic species which indicate they are very toxic. The thermochemical, electronic, and toxicity properties of these compounds and their analog radicals will be presented. Additionally, theoretical NMR chemical shifts for the most toxic by-product of high temperature cooking are also reported.

Key Words: Ab initio, by-product, isoindole, pyrolysis, QSAR, toxicity

S2014-59 Molecular Modeling of Toxic Indole Derivatives from High Temperature Cooking

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Abstract

More than two decades ago, Japanese scientists discovered a new family of highly mutagenic compounds classified as heterocyclic aromatic amines from roasted meat and grilled Fish. This group of compounds will form the basis of this investigation from a theoretical perspective. Accordingly, the theoretical behaviour of indole derivatives; isoindazole, 1-methyl indole, 4,7-dimethyl isoindazole and carbazole were explored at a pressure of 1 atmosphere over a wide range of pyrolysis temperatures (323-923 K) typically at temperature increments of 50 K. Ab initio analytical gradients at MP2 level of theory with 3-21G and 6-31++G(d,p) basis sets and Molecular Mechanics (MM) with universal force field (UFF) from Gaussian 03 computational platform were used for geometry optimization, internal energy calculations, molecular orbitals, and vibrational frequencies. It was observed the global minimum for isoindazole at 323 K was 75.80 kcal/mol whereas that of carbazole was 123.78 kcal/mol under similar conditions of

pressure and temperature. The stability of these molecular compounds decreased with increase in pyrolysis temperature. To make decent conclusions on the potency of these indole derivatives (isoindazole, 1-methyl indole, 4,7-dimethyl isoindazole and carbazole) and their effect on human health, toxicity values were estimated using Quantitative Structural Activity Relationship (QSAR) method found in HypeChem computational software. Toxicity indices for isoindazole, 1-methyl indole, 4,7-dimethyl isoindazole and carbazole were -0.16, 0.01, 0.14 and -0.07 respectively, while those for their corresponding radicals were -0.12, -0.21, 0.19 and -0.17. These values point to highly hydrophilic species which indicate they are very toxic. The thermochemical, electronic, and toxicity properties of these compounds and their analog radicals will be presented. Additionally, theoretical NMR chemical shifts for the most toxic by-product of high temperature cooking are also reported.

Key Words: Ab initio, by-product, isoindole, pyrolysis, QSAR, toxicity

S2014-60 Relative Efficiencies of Line Transect and Point Count Census Techniques: A case study of University of Eldoret

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Abstract

This study was conducted to determine relative efficiencies of line transect and point count avian census techniques in different habitats at the University of Eldoret. The objectives of the study were (i); to obtain the relative densities, bird species diversity and evenness using the point count and line transect techniques in all the habitats, and (ii) to compare the avian census results obtained from all habitats using line transect and point count techniques. Line transects and point count stations were randomly located on a straight line by marking vegetation through each habitat. Line transects were 100 metres long, and both point stations and line transects were 100 metres apart to avoid any double counting. Counting was done in the morning and evening. Birds were counted within a radius of 30 metres for point counts and on either side of the line transect over a band width of 30 metres. The two techniques provided estimates of relative densities, bird species diversity and evenness. Relative densities did not differ significantly, $\chi^2 = 4.019$, $df = 1$, $P > 0.05$ in all habitats but the point count yielded higher estimates than line transects both in the morning and in the evening. There was no difference in bird species diversity results obtained using both techniques in the different habitat types, $t = 0.635$, $df = 3$, $P = 0.571$. The pattern of evenness obtained by the two techniques was dissimilar. In conclusion the line transect technique was found to be more feasible in large strands of vegetation, especially in woodlands. Transects should be cleared and marked to avoid time wastage during data collection. Point counts are desirable in areas where the vegetation occurs in small stands, or in more or less open vegetation.

S2014-61 Crop Modeling on Diseases and Pest of Finger millet at Alupe, Kenya

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Abstract

A field trial on mass selection of finger millet against disease and pest was established at Alupe Research testing centre in Busia county. A total of 130 clones were tested in an incomplete block design of 11 blocks in two replicates for two seasons per year over two year period. Data on disease and pest, growth parameters and yield components were collected by researchers. The data was captured on spreadsheets and analysed using SAS (ver 8) package. Stepwise regression was used for reduction of variables so that we retain the variables that contributed high variability to the yields. A covariance analysis was used to remove variability of covariates that were initially not considered but collected. Principle component analyses (PCA) was used for grouping the clones into susceptible, moderate and resistant so that clones that are found to be high yielding and resistant can be advanced to the next stage of evaluation. The result showed that striga weeds (Svig, strigaF), blast disease (N_Hblast), growth parameters (Fbranching, EExer, Plant Stand GrNCol) were retained in the regression model showing that they contributed more to the yield. We used striga and blast effect as covariates in the ANCOVA modeling on yields and growth parameters and the findings are presented for adoption.

Key words: Stepwise regression, PCA, ANCOVA, covariates

S2014-62 Challenges Facing Smallholder Farmers in Decision-Making in Innovative Agricultural Development in Semi-Arid Areas of Eastern Kenya

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Abstract

Declining agricultural productivity among smallholder farmers in Sub-Saharan Africa remains a major bottleneck to the continent's agricultural sector development. In Kenya's semi-arid lower Eastern region, efforts have been made through public-private partnership (PPP) initiatives to address food insecurity. Inadequate understanding and poor documentation of factors related to challenges facing smallholder farmers in decision-making to improve farm productivity exists. A study involving 34 Key Informants (KI) and five Focus Group Discussions was carried out to determine the factors affecting food security. Data were collected using a check-list and a semi-

structured questionnaire and analyzed using SPSS versions 17.0. Results showed that: farmers faced challenges in deciding how to improve their farm productivity. About 76% of KI respondents observed that some of the promoted technologies did not address farmer's immediate needs; 65% said that the technologies were promoted without considering prevailing farmers' circumstances. The study concluded that farmers needed accurate information to make informed farming decisions; their immediate needs required technologies with wider utilization options; analysis of farmers' operating circumstances was crucial. Consequently, development partners should: provide adequate information on available technologies and innovations; exploit the existing PPP fora to promote technologies and innovations with wide utilization options; put strategies in place to analyse farmers' circumstances and promote improved technologies and innovations.

Key Words: Declining agricultural productivity, decision-making, farmer circumstances, food insecurity, improved technologies and innovations, limited utilization options

S2014-63 Addressing Food Security/ Sugar Shortage in Kenya With Stevia (*stevia rebaudiana*) for Social Economic Growth through Agribusiness

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Abstract

Stevia is the collective name for a food sweetener and a sugar substitute made from the leaves of a plant species *stevia rebaudiana*. It is a native plant of Paraguay and has a long history of use in many countries of the world for more than 1,500 years. The leaves have been used for hundreds of years in both Brazil and Paraguay to sweeten teas and medicines. With its Steviol glycoside extracts having up to 300 times the sweetness of sugar; it has attracted attention in western countries especially with the rise in demand for low-carbohydrate, low-sugar sweeteners.

Growing Stevia is easy in well drained beds or large containers. It grows best in warm conditions. Plants grown in warm climates will grow up to 60 cm in height and in width. In cool climates it will grow up to 30 cm in height and in width. Stevia can be started from seeds indoors to enable control of the growth conditions but its best to grow it from rooted cuttings.

Germination tends to be spotty so keep seed sown plants in bright light till the weather warms up. An average family will need 4-5 plants for a year's supply of dried stevia leaves. Stevia is a new promising renewable material for the food market. The market potential is still untapped.

Due to its negligible effect on blood glucose, it is attractive to people on carbohydrate-controlled diets. Unlike sucrose, it does not have any impact on blood sugar level, and may also reduce incidences of tooth decay. The research findings were; the glycosides that give stevia its sweet taste was isolated and two compounds, stevioside and rebaudioside were found to be 250-300 times as sweet as sucrose, heat stable, pH stable and not fermentable.

Key words: Food security, Steviosides, glycosides, rebaudiosides, sucrose.

S2014-64 A survey on Mobile phone Related issues in WI-FI calling

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Abstract

Wi-Fi is an industry name for wireless local area network (WLAN) communication technology based on the Institute of Electrical and Electronics Engineers' (IEEE) 802.11 wireless networking standards. It uses 2.4 GHz UHF and 5 GHz SHF radio waves .It is a system of wirelessly connecting devices allowing connection between devices without the use of cables .Many devices can use Wi-Fi, from personal computers, video-game consoles, smart phones, some digital cameras, tablet computers, Ipad, digital audio players and some speakers. Wi-Fi Calling uses Wi-Fi to provide better mobile phone coverage. It is based on a Smart Wi-Fi Application that is pre-loaded onto a phone. Wi-Fi Calling lets you make calls and send texts via Wi-Fi when you're out of cell signal range and wherever Wi-Fi is available. Wireless networks are more often than not physically exposed, so the chances of intrusion in these networks are as well high. This paper investigates mobile phone Wi-Fi calling related issues .A finding from this paper has indicated positive effects on the use of Wi-Fi calling hence consequently a need for more in-depth and longitudinal research into the issues related to this splendid technology.

Keywords: Wi-Fi Calling, WLAN, IEEE, GHz, Smartphones, 802.11

S2014-65 Influence of Deposition Parameters on the Optical Properties of DC Magnetron Sputtered Tungsten Oxide Films

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Abstract

This paper reports on the properties of tungsten oxide films deposited on glass substrates fabricated at different deposition parameters using DC reactive magnetron sputtering. The films were characterized optically in the visible and infrared regions and also their structure was analyzed using XRD. Further analysis was conducted on the optical spectra through simulation to obtain the optical constants. Films were investigated with regard to temperature, O₂/Ar ratio and thickness. Those deposited at ambient temperature were amorphous while elevated temperatures (> 200°C) resulted to crystalline films. The film crystallinity was also found to increase with thickness while increase in O₂/Ar created a transparent window in the visible region which tends to shift to higher wavelengths with increase in O₂/Ar ratio.

Keywords: tungsten oxide, optical properties, DC magnetron sputtering, thin films

S2014-66 Internet over Digital Terrestrial TV Broadcast Networks: A Proposal for Bandwidth Allocation for Internet Piggyback

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Abstract:

Most countries over the world have been upgrading their Television broadcasting networks from analog to digital; this is because of the many advantages offered by the digital networks. Some of which include vast amount of information delivered by the digital TV system. It is in this concept that this paper proposes another advantage that the digital terrestrial TV would offer to the consumers. Digital terrestrial TV networks that also carry Internet data is the intention that is described in details. Given the vast networks that have already been implemented by service providers, users would find it very convenient just to plug the computers to the set-top boxes and access Internet. Consumers will find it very convenient to pay for both the TV content and Internet usage separately. With several technologies like ATSC, DMB, DVB-T2 and ISDB-T already in existence, it is from this background that a concept to improve bandwidth, compression, source coding and line coding is suggested for maximum network exploitation.

Keywords: bandwidth, Television broadcasting networks, internet, Digital terrestrial TV

S2014-67 Experiences of support by and for HIV/AIDS partner: Serial-interview study on advanced AIDS patients

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Abstract

HIV continues to be a major global public health issue with approximately 35.3 million people living with HIV in 2012 as per the World Health Organization data. Sub-Saharan Africa is the most affected region yet limited public health care resources are overstretched and communities and families are now taking more responsibility for providing care. However, little work has been done to investigate the experience of support by and for HIV/AIDS partner. Therefore, this study investigates psychosocial impacts of living with advanced AIDS at household level with reference to HIV-positive couple and policy implications. As part of larger longitudinal study, thirty patients with advanced AIDS and one nominated family were recruited. Eight patients died within one month. Eleven were HIV-positive couple supporting each other in advanced stage of AIDS (stage III & IV). The study done at Hospice Africa Uganda (HAU) used consecutive sampling. Interviews were done in their homes. Ethical issues were considered and data were analyzed using content thematic approach. The study showed marked differences between participants who had HIV-positive partners and the rest. The experience of support by and for an HIV-positive partner took several dimensions depending on the stage of HIV/AIDS for the patient and partner, available support, perceived unmet needs and handling of family responsibilities. Fear and upset over how the disease affected their loved-ones or their relationship and care giving against backdrop of dire poverty, insufficient support, and dual roles placed considerable demands on HIV-positive partner. Whilst stigma, prejudice and disclosure issues exacerbated stress levels, patients enrolled in palliative care reported improvement mainly in their physical and psychosocial aspects. In conclusion, lack of support by and from HIV positive partner was often daunting and devastating. Respondents who felt supported linked this support to improved psychosocial status. Thus recommendations for policy on home-based care with palliative care component are critical.

Key words: HIV/AIDS, Africa, HIV-positive partner, palliative care, thematic approach

S2014-68 Determined Blind Source Separation Using Novel Machine Intelligence

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Abstract

This paper proposes a novel algorithm based on minimizing mutual information for blind source separation. The paper exploits the underlying principles of Independent Component Analysis (ICA). A neural network of radial basis function (RBF) is used as a de-mixing system to separate sources in post-nonlinear mixtures. This method is applied on instantaneous mixtures of speech signals and synthetic periodic signals of non return-to-zero type. In particular, a method based on Maximum Entropy has been compared for its separation ability, processing time and accuracy. The quality of the output, the complexity of the algorithm and the simplicity of implementation of this method are some of the performance measures which are highlighted in respect to the

applied problems. The experimental results show that the proposed method is effective, and also show that the local character of the RBF network's units allows a significant speedup in the training of the system.

Keywords: Blind Source Separation, Independent Component Analysis and Radial Basis Function network (RBF).

S2014-69 Information Communication Technology for Community Development: Boosting Innovation through Mobile Technology

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Abstract

Technology is playing a decisive role in humanity progress. Throughout history, it has not only strengthened economic development but has become a powerful tool in all aspects of human development. In developing countries, the poor are not only deprived of basic resources; they lack access to vital information that is crucial to their lives and livelihoods, Information about market prices for the goods they produce, about health, about structures and services of public institutions and about their rights. It is clear that they have not yet reaped all the advantages ICT offers. This article seeks to identify the type of ICT prevalent among the farmers in Laikipia county in Kenya and the various ways that can be used to fill the digital gap that exist among the ICT users that prevent them from reaping full benefits that ICT offers. Similarly, the article suggests ways of improving the use of ICT for developments. It reviews past literature and comes up with a wider overview of what developing countries should do to take full advantage of the opportunities and benefits offered by ICTs to boost their economic developments and lift their livelihoods.

Symposium B2014

B2014-01 An Evaluation of Safety Training on the Frequency of Accidents in Manufacturing Firms in Kenya: A Case of Nakuru Municipality

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Abstract

There are many factors that affect an employee's productivity at the place of work. In business and industry, responsible managers realize the importance of safety in the workplace yet complying with the increasing number of laws, rules, and regulations becomes forevermore challenging. An unsafe working environment leads to deaths, accidents, ill health, high costs incurred to compensate the injured persons and employee redundancy. The general objective of this research is to assess the impact of safety training on the frequency of accidents in the manufacturing firms in Kenya. The target population of this research are the employees in the manufacturing firms within Nakuru. Twenty manufacturing firms in Nakuru were conveniently sampled. A sample size of 100 respondents was drawn from a population of 300 employees. A random sampling system was adopted and applied in every firm. This sample is manageable and realizable. This study was designed to cover both literature review and report writing; collecting, collating and reviewing available literature on employee training and employee safety and further baseline information about the manufacturing firms working conditions. A survey was carried out through the administration of open-ended questions, structured questionnaires and discussions with key informants, focus groups and individuals. Field observations were also considered in this study. The research hypothesis has been tested using Chi-square (χ^2) distribution. Based on the research hypotheses, the researcher established a relationship between safety training and the frequency of accidents in the manufacturing firms within Nakuru.

Key Words: Safety: Manufacturing industry, accidents

B2014-02 Analysis of Determinants of the Variation in Fees and Expenses Charged BY Mutual Funds in Kenya

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Abstract

Mutual funds fees and expenses negatively influence investors' return. Although, investment in low fee index funds have been shown to increase investors return in the long run, mutual funds charging higher fees and expense ratios till continue to be admired globally. Using a regression analysis with data obtained from 31 equity funds operating in Nairobi Stock Exchange (NSE) market between fiscal year 2005-2010, this paper analyzed the determinants of the variations in fees and expenses charged by mutual funds. Result indicates that, the mean management fees for

the 6 year period averaged 0.5% (bond funds) and 0.8-1.5% for equity and balanced funds. Findings further revealed that, smaller funds charged higher fees and expenses than larger funds. In addition, bond funds with higher returns on investment charged lower fees and expenses in comparison to low interest bearing bond funds. Summary conclusions and recommendations are contained in the main paper.

Key words: Mutual funds, Nairobi Stock Exchange, Kenya, Equity funds, Balanced funds

B2014-03 Assessing the Key Drivers of Potential Gross Domestic Product: A Production Function Approach

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Abstract

Kenya is an emerging economy with agriculture playing a fundamental role in economic development. The country's long-term goal is rooted in vision 2030 that envisages an economic growth of 10 percent. Moreover, the vision places a high premium on stable macroeconomic environment. Understanding economy's level of output requires understanding of aggregate demand and supply. Empirical evidence shows that potential Gross Domestic Product (GDP) is perhaps the most important indicator of economic activity in a country. Moreover, over the medium term, the ability of a country to produce goods mainly depends on the physical capital, employment, and total factor productivity (TFP). However, in the Kenyan context, there exists an empirical dearth in knowledge on the values of potential GDP and its key drivers. The current study therefore fills the aforementioned knowledge gap by empirical decomposition of a Cobb Douglas Production function into TFP, capital stock, and labour attributes. The final potential output was estimated using the growth accounting approach. The study used national accounts secondary data. Study findings show that labour is the major contributor to potential GDP at 6.46 percent as compared to 1.27 percent of capital. The study therefore provides important policy insights on the use of labour to drive the economy as compared to capital. Moreover, the study recommends labour intensive production processes aiming at giving Kenya an opportunity to realize its potential GDP besides developing along a sustainable path.

Key words: Potential GDP, Cobb Douglas production function

B2014-04 A Study of Marital Conflict Management among Couples in Ainamoi Division of Kericho County

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Abstract

Conflict exists everywhere. People experience conflicts in their jobs, families, schools and even in the church. Conflict can neither be avoided nor ignored. Conflict that is not managed correctly diminishes happiness and has the potential to destroy people, it leaves them broken and burnt out. Marital conflict is a part of everyday life and how couples handle conflict in their relationship affects the strength and type of relationship a couple may have. Conflict may have the power to destroy or build a marriage. The study on marital conflict management among couples in Ainamoi Division was conducted through randomly interviewing forty married individuals in Ainamoi Division of Kericho County. The researchers employed a descriptive approach to analyse the data which was displayed through tables, charts, and graphs. The research has shown the following factors causing conflict in marriage in their order of priority: communication problems, conflict in the area of financial management, issues surrounding children, in-laws, sexual issues, and finally, behaviour problems. Therefore, there is a need to counsel and teach married couples skills such as communication, financial management and relational skills in order for them to know how to manage marital conflict. This study concludes that marital counselling is in dire need in the society, and so counsellors, pastors and church leaders should come out and make awareness of it in the society

Key words: Marriage, conflicts and management

B2014-05 Can Transformational Leadership Work within University Settings? A case of Heads of Academic Departments in the Kenyan Public University Setting

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Abstract

Transformational visionary and inspirational leadership practices of departmental heads can determine levels of organizational citizenship behavior (OCB) of the academic faculty members in a public university setting. The organization and management of public university activities depend on active involvement of academic faculty members because they play a vital role in the university's survival. This implies that university management is incomplete without notable participation of the academic faculty members, whose foundation is laid at the departmental level. Consequently, certain leadership styles have distinct bearing on the levels of obedience, loyalty and participation of employees, which subsequently influence organizational effectiveness. Based on this premise, this paper presents results obtained from a qualitative case study conducted among academic faculty members of one faculty in one of the public universities in Kenya. The purpose of this study was to determine how heads of departments' leadership styles influence the degree of organizational citizenship behavior (OCB) of the academic faculty members within their departments – and by extension – the effectiveness of the university. Data was obtained through in-depth interviews with the sample heads of departments and academic faculty members. The results obtained add empirical support to the assertions that indicators of organizational effectiveness are associated with employees' willingness to go above and beyond their job requirements as indicated by the levels of OCB largely influenced by the leadership styles.

B2014-06 Factors that Influence Labour Turnover of Private School Teachers in Kenya: A Case of Kisii County

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Abstract

Private schools have been experiencing high turnover of teachers, weakening its capacity to efficient service and good performance. Arising thereof, the private schools' management incur huge expenditures in progressively frequent recruitment of its staff. This study sought to establish the factors that influenced high turnover of private school teachers. A descriptive research approach was adopted for the study which covered simple random sampling of 154 respondents out of a population of 870. A survey questionnaire was used to collect data, and analysis was through descriptive statistics. The results indicated high turnover of teachers with poor remuneration, industry dynamics, competition and poaching, a non-responsive management and poor leadership being the main causes of high turnover; with no immediate remedial plans. Though issues of high labour turnover had been raised with management, no action had been taken on them; instead the private schools' management had opted for untrained teachers to provide it with teaching services. The study concluded that high turnover of teachers, was a major problem with private schools that needed immediate actions to reverse the trend. Further, labour turnover was factor of internal organizational issues of remuneration, working conditions and leadership. There were no immediate plans to address the problem as manifested by the management's continued reliance on untrained teachers and frequent recruitments with associated high costs than if done professionally. The study recommended improvement of terms and conditions of service in line with the dictates of the industry (benchmarked to those of leading competitors); regular consultations with and improvement in communication with teachers; acquisition of modern well trained teachers among others to help reverse the trend. The ultimate focus should be to build its own internal capacity to hire qualified teachers as the savings from doing so are enormous.

B2014-08 Devolution versus Democratization in Kenya: A Case of Central Division, Machakos District, Machakos County Government

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Abstract

The concept of devolution is not new in Kenya; for example during the Kenyan independence in 1963, the constitution provided for the Majimbo which is actually a replica of devolution. The Mamimbo was to have regional assemblies at the local governments, then Senate and National Assembly at the Central government. Ideally, we find the same structures today under the devolution. This study will investigate the causes of contention in the implementation of devolution by the County governments. The central research question will be, "What factors are

upsetting the implementation of devolution at the County governments”? This study will be conducted in Machakos County, Central Division, using a probability technique, a sample that is 30% of the population will be studied. A survey research design will be adopted and the key findings, conclusions will be presented after the analysis of the data. The recommendations will also be given. Data will be presented using tables and charts.

Key words: devolution, governance, democratization, participation, accountability and transparency.

B2014-09 Effects of Coordination on strategy implementation in manufacturing firms: The case of manufacturing firms in Nakuru.

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Abstract

Matching structure to strategy requires making structure critical activities and organizational units the main building blocks in the organization. Coordination is one of the critical activities in any organizational strategy implementation. Internal organization of each company is somewhat peculiar, the result of many organizational decisions and performance. This study was to determine the effect of coordination on strategy implementation in manufacturing firms in Kenya. The target area of the study was Nakuru Municipality. The study population included 15 randomly picked manufacturing firms in the municipality of which have been in existence for not less than 10 years, so as to adequately determine the magnitude of strategy implementation. The 120 respondents who were the managers and supervisors in the firms' departments provided information regarding the extent of the use of resource sharing between departments ,informal contacts of employee in the firms and firms having goals which have been mutually agreed upon .The study employed a survey design. Descriptive statistics was used to analyze the data. Results of Correlation and chi-square analysis showed that coordination show significant effect on strategy implementation in manufacturing firms. Therefore, manufacturing firms should ensure that coordination is practiced.

Keywords: Coordination; Strategy implementation; Manufacturing firms

B2014-11 Human Capital Formation and Sustainability of Devolved County Governance: A Case of Kenyan Devolved Governance

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Abstract

The training and development of human resources in any organization is widely acknowledged as a realistic step toward enhancing job performance and sustainability of projects. Human capital formation therefore, is a field that needs special attention in the new devolved county governance. The new devolved county governments in Kenya require investment in humanity and their development as a creative and productive resource. Human capital is required to enhance economic development, eradicate poverty and improve productivity. There is a greater need for ICT experts, security officers, researchers, entrepreneurs, business executives, administrators, scientists, nurses, doctors, engineers, teachers, lecturers, accountants and other levels of workers in the devolved county governments. This article argues that human resources are active agents that accumulate wealth for the county, exploit material resources, build social, economic and political organizations and assist in national development of a country. The results show that if a county government has sufficient and effective personnel, with suitable and relevant skills and knowledge, there is every possibility for achieving its aim and objectives. Additionally, a county government which is unable to develop the skills and knowledge of its people and utilize them effectively in the promotion of county economy will be unable to develop anything else. The study recommends that a county government should have sufficient trained personnel in order to improve the operations of systems which will have the ability to respond adequately to societal needs thus enhancing attainment of vision 2030 and millennium development goals.

Key words: Human Capital, Sustainability, County Governance

B2014-12 Impact of Enhancing Human Resource Capabilities on the Competitiveness in the Kenyan Public Service

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Abstract

Development of employee capabilities is an important endeavor for any organization that wants to gain competitive advantage. Most organizations recognize that enhancing the capabilities of people in the organization is the most inevitable change expected in this dynamic era of globalization and liberalization. Competent employees reflect positively in any institution in terms of quality of work or services rendered. In Kenya's perspective, the competitiveness of public institutions in respect to human resource capabilities is losing out in terms of competition to the private sector based on various issues. Most of the public service organizations lack innovative and well trained human resource due to low remuneration and motivation. The concept public private is being embraced in public service with the aim of enhancing productivity. Comparatively most of the private companies are on the fore front getting all the young and innovative thinkers straight from intuitions of higher learning and from the industry, resulting in the excellence and drive of their work force. The main purpose of this paper is to

examine the impact of enhancing human resource capabilities on the performance in the public sector in Kenya. The paper provides a refined conglomeration of all the ideas discussed to justify the importance of enhancing human resource capabilities and its impact on performance on public sector in Kenya's perspective. The paper is expected to inform action plan in the field of human resource development in public sector not only in Kenya but also in other developing economies.

Key words: Human resource development, Human resource capabilities, Public service performance.

B2014-14 Innovation in the Language of *Coca Cola* Advertisement on Television

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Abstract

Innovation is the way of transforming the resources of an enterprise through the creativity of people into new resources and wealth. Advertisements on television are a rich site for data on language, innovations and scientific development. Language in television advertisements comes in multi-modes, that is, it uses verbal and visual modes of signification. This poses challenges to television viewers because in multimodal discourses, viewers are faced with the changing phenomena in which language per se is being displaced by sound and image, taking over tasks associated with the role of language. Verbal and visual representations are co-deployed to make meanings that go beyond what either would make alone. It is this synergy across semiotic modalities that we analyze in a *Coca Cola* advertisement on Kenyan television channels. This paper uses Kress and Van Leeuwen's (1996) theory of Multimodal Discourse Analysis to examine the modes of signification in the *Coca Cola* advertisement in relation to consumer reactions to the advertisement. Findings reveal that modes of signification include color, distance, face-work, gestures, graphics and music, all of which work in complementarity to craft the advertisement discourse. In this paper we posit that television advertisements create meaning through the careful manipulation of verbal and visual modes of signification so as to craft the desired interpretations that are advantageous to the advertisers. We also posit that television advertisements are effective in eliciting the desired responses from television viewers thus promoting consumerism and globalization.

Key words: advertisements, innovation, modes of signification, multimodality, visual semiotics

B2014-15 Effect of Motivation in Employee Performance in the Kenya Civil Service

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Abstract

The concept of employee motivation has been a perennial subject of debate among scholars. Motivation does affect and continues to affect employee performance in organizations that leads to low performance. This paper seeks to examine selected motivational issues that affect employee performance in the Kenyan civil service. Motivation plays a critical role in the overall performance and growth of organizations. Most of the employees in the civil service exhibit low motivation to certain extent contributes to the minimal performance. The government of Kenya through its ministries since the early 1990's has come up with strategies towards performance improvement. These issues do not only affect the Kenyan civil service but also other developing economies. As such, managers continue to be preoccupied with the search of strategies and measures to be taken to improve and increase employee performance.. This is done with sole objective of enhancing employee performance. However, the underlying factors of de-motivation continue to threaten every gain that the management in organizations make. Yet it has been argued that demotivated employees can nullify sound organizations. This paper seeks to examine the selected motivational factors affecting employee performance with reference to Kenya's civil service. The paper will be structured based on the following areas: how remuneration affects employee performance in the civil service, how working environment affects the employee performance in the civil service, employee training and development needs that affect employee performance in the civil service, the impact of organizational culture on the employee performance in the civil service. The last part of the paper provides the way forward. This paper is expected to shed more light to the top management on issues and strategies related to employee motivation in civil service especially in the context of developing economies like Kenya.

Key words: employee motivation, civil service, employee performance,

B2014-17 Devolved Governance and Leadership in Pastoral Regions in Kenya

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Abstract

The new Kenyan constitution introduced new social, economic and political opportunities for Kenyans. Devolution is the most transformative provision with profound effects on governance system, the manner in which services will be rendered, because all the sovereign power belongs to the people of Kenya. The sovereign power of the people is exercised at national and county levels which will lead to pastoralists enjoy the sovereignty as “people of Kenya”. The problem is will the national and county governments recognize the right of the communities to manage their own affairs and further their developments? How will the interests of the pastoralists be protected in devolved governance? Since over the years, pastoralists have suffered marginalization by governments of Kenyatta, Moi and Kibaki and feel excluded from the mainstream development agenda of the country. The objective of the research is to study how existing institutions to oversee the implementation of constitutional provisions including the rights of pastoralists are protected and promoted. It will adopt descriptive analytical study of the empirical data. The findings will be significant for self governance and participation of the

people in the exercise of the powers of the state and in making decisions affecting them. It is concluded there is little investment in such areas and hunger, conflict and abject poverty have defined and persisted in their existence. This is what is expected to be addressed with devolution and their leaders to be in forefront to uplift themselves from the sad moments in the previous governments to albeit progressivism. It recommends raise their own revenues and receive revenues from national government and appropriately plan; budget; implement; monitor and make their own laws and policies. Ensuring diversity in employment, because pastoralists who may be minorities in some counties may get a chance to be recruited and where they will majority will also benefit; equalization fund, allocation will boost revenue base and used for good projects and if the money is used prudently will certainly contribute to development of basic services in those areas.

Key words: Devolution; Sovereign; Marginalization; Progressivism, Prudent

B2014-18 Motorcycle (Boda-Boda) as Emerging Business for the Poor in Transport Industry and Sustainable Development in Modern Kenya

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Abstract

Motorcycle business known as “Boda-boda” eased transportation problem of connecting urban and rural areas in Kenya. “Boda-boda” originated early 1990s from Uganda through Busia town in western Kenya and spread to adjacent towns, subsequently other towns and all towns currently are crowded with Boda boda in Kenya. Initially bicycles were used as means of transportation in plains but as the introduction of motorcycle had afforded prices, businessmen shifted and used them and are easy to maintain. It is booming, since it is readily available in urban and rural areas and people always transport goods to and fro and uses paths instead of roads given that feeder roads in Kenya are impassible during rainy seasons. The problems of Boda boda riders cause accidents in Kenya highways and traffic jams in towns, yet it is a source of livelihood for the unemployed graduates and sustainable development. The objective is to investigate whether motorcycle riders acquire licence through training before transporting goods and people, and study the strategy to be used to minimize frequency of accidents without affecting the business. Interview method will be used to collect data from riders in five towns in Kenya through purposive random sample to represent the forty seven towns in the counties. Analyzed data has been presented through graphs and tables. Although Boda boda cause accidents, it is a key source of employment today, leading to socio- economic, structural and human resource sustainability, as a consequence of national development in Kenya. It is recommended traffic laws be enforced to enable it flourish.

Key words: Employment; Sustainable; Development

B2014-19 The Effect of Moonlighting on Service Quality among Public Universities in Uganda: The Case of Makerere University and Mbarara University of Science and Technology

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Abstract:

The desire of workers to engage in moonlighting, a phenomenon of multiple job-holding is a reflection of some of the changing labour market outcomes. Moonlighting – having one or more jobs is a fact of life for many professors and teachers in Uganda today. Despite the seemingly conspicuous existence of multiple job-holding by Professors and teachers in Uganda, much remains to be known about its effect on service quality in terms of the key functional areas of a University such as the quality of teaching, research and the level of community outreach. This paper will employ a survey approach to explore the nature and extent of moonlighting on service quality. Qualitative and quantitative research approaches will be used. Regression analysis will be used to investigate the extent of the effect of moonlighting on service quality. The study will sample professors from two public Universities in Uganda who teach in more than one University to explore the nature and extent of moonlighting on service quality. It will also use in-depth interviews with each of these teachers to find out how moonlighting affects their professional duties.

Keywords: Moonlighting, Service Quality, Public Universities and University professors.

B2014-20 Poverty Reduction and Asset Based Community Development Approach: Remedy for Kenyan County Governments

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Abstract

The UNDP human development March 2013 report shows that many economies in the south have made a remarkable socio-economic progress, but most of the African countries are in the least human development category. In Kenya poverty eradication has been tackled in various ways for decades but the situation has worsened with the GDP remaining below 6%. Kenyan County governments especially are faced with the challenge of inadequate allocation of revenue from the central governments and limited capacity that would otherwise see counties engaging actively in addressing widespread poverty. Building resilient economies that would less depend on central government and other external support is therefore fundamental for county governments. This article argues that Asset-based community development (ABCD) approach provides an applicable framework for achieving sustainable development. It is a strength-based methodology to development that moves away from deficiency approach. According to Amartya

Sen's Capabilities approach, development has to be more concerned with enhancing the lives we lead and the freedoms we enjoy. The results show that ABCD approach has the potential of building a greater sense of responsibility among citizens with regards to involvement in finding sustainable solutions to local problems. Moreover, the success of county governments in steering development is dependent on identifying and connecting of local assets within the communities. The study recommends need to develop effective structures that contribute to achieving vision 2030 and attainment of the millennium development goals. It also suggests adoption of a more participatory approach of governance in order to enhance sustainable development for county governments. Additionally, there is need to focus locally and tap on local power and capabilities.

Key words: ABCD Approach, Poverty Reduction, County Governments

B2014-21 Assessment of Quality Management practices, tools and techniques: the case of learning institutions in Kenya

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Abstract

In the recent past organizations both public as well as private have risen to the need of ensuring quality in their operations. Due to internet and browser technology and other dynamics of globalization customer awareness has risen to unprecedented level thereby raising their expectations on quality of products and services that are offered by organizations. Organizations in their endeavour to get a competitive edge are focusing their attention on excelling in quality of their operations and offerings to meet customer requirements better than competitors. Here in Kenya firms are diligently seeking to be ISO certified and this too puts demand on quality. ISO certification not only improves the running of organization but also enhances customer perception. Quality Management (QM) has therefore become critical in organizations as well as among scholars. This paper examines quality management practices, tools and techniques and further investigates their level of adoption in learning institutions in Kenya with a view to making them known to the institutions management to facilitate successful quality management implementation towards achieving the holy grail of Total Quality Management in line with the expectations of the highly envisaged vision 2030 which seeks to make Kenya a middle income economy. The researcher purposively selected two institutions that have attained ISO certification, one a university Campus of a renowned public university (JKUAT Mombasa CBD Campus) and the other one, a middle level college that is due to become a national polytechnic (Mombasa Technical Training Institute) to test the level of application of QM practices, tools and techniques and finally make recommendations on implementation of those practices, tools and techniques that have been found useful to other organizations.

Key words:Quality Management tools and techniques, Total Quality Management, Quality Management practices, Customer requirements.

B2014-22 The Effect of Employee Interpersonal Relationships on Retention of Millennial Employees in Private Hospitals in Bomet and Kericho Counties, Kenya

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Abstract

This paper examines the influence of employee's interpersonal relationships on retention of millennial employees in private hospitals in Kenya. The purpose of the research was to assess socio-technical factors that influence retention of millennial employees in private hospitals in Bomet and Kericho Counties. As such, one of the objectives was to establish the extent to which interpersonal relationships of employees influence retention of millennial employees in private hospitals in Bomet and Kericho Counties. This study adopted descriptive research design. The target population comprised all employees of private hospitals in the Counties. Stratified random sampling technique was used to select the respondents of this study. The basis of stratification was age of employees. Questionnaire, interview schedule and content analysis were the main data collection tools. Qualitative data were analyzed in form of frequency counts and percentages. Karl Pearson Product Moment correlation coefficient was computed to establish the level of significance of relationships between study variables. The hypothesis used to test the significance of interpersonal relationships of employees on employee retention stated that: there is no significant relationship between interpersonal relationship of employees and retention of millennial employees in Bomet and Kericho Counties. A Karl Pearson Product Moment Correlation Coefficient was further computed using a two tailed test at 0.01 significance level. There was therefore a significant relationship between interpersonal employee relationship and retention of millennial employees at their work places. Of greatest significance was the strength attached to networking services provided in the hospitals for employees. The study strongly recommends that hospital managements should develop innovative and competitive intervention strategies to help them build sustainable retention of millennial employees.

Keywords: Employee Interpersonal Relationships, Retention, Millennial Employees, Private Hospitals, Bomet, Kericho Counties, Kenya

B2014-23 The Role of Gender in the Performance of Small and Medium Enterprises: A case study of Kilibwoni Division, Nandi Central District, Kenya

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Abstract

Entrepreneurship development is increasingly becoming important in economic growth in many countries. The majority of workers in the developing World cluster in small and micro enterprises in the private sectors. Entrepreneurship and investment influences the rate and linkages which develop in an economy, the labour demanded and the human capital investment meeting these labour demands. Rapid growth can contribute to poverty reduction. Social norms strongly influence men's and women's work and working environments. Some tasks and jobs are considered more appropriate for men or women and covert screening filters out applicants who

defy these norms. These gender norms frequently underpin sex-segmented labour markets typically confine women workers to low-wage, low productivity employment and can limit the responsiveness of labor to new demands for high skilled workers. Sluggish labor markets can impede adjustment, distort human capital investment and inhibit a firm's ability to switch to new activities and compete in a dynamics and globalizing market. Development occurs within an institutional and economics environment that is similarly shaped by customers, social norms, implicit and explicit codes and conduct. The study sought to establish the impact of gender on micro-enterprises performance. The main objective was to establish the differences in the constraint facing female and male owned micro-enterprises respectively in Kilibwoni Division in Nandi Central District, Nandi County. Data from a survey of 180 micro-enterprises were used in the modified ordinary least square (OLS).the study concluded that the impact of education on performance is more pronounced in female- owned businesses than in male owned ones. The study therefore recommends the promotion of micro-finance institutions that target financing of non-farm economic activities with a deliberate bias towards providing credit to women entrepreneurs.

Key Words: Labor Demands. Capital Investment. Micro Enterprise.

B2014-24 The Role of Technology in Empowering Women: Global Perspective

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Abstract

Technology has become a strong force in transforming social, economic, and political life globally .The paper sought to establish why most women are in the deepest part of the divide further removed from the technology age than the men whose poverty they share. If access to and use of these technologies is directly linked to social and economic development, then it is imperative to ensure that women in understanding the significance of these technologies and utilize them. If not, they will become further marginalized from the mainstream of their countries and of the world. The paper looks into reasons why many people dismiss the concern for gender and technology on the basis that development should deal with basic needs first. Technology can be an important tool in meeting women's basic needs and can provide the access resources to lead women out of poverty .This paper highlights that Women, Gender, and Technology is an interdisciplinary volume, which contributes new insight into the ways in which issues of gender and technology infuse career structures, the use and adoption of technology, and the construction of commercial and business forces in the knowledge economy. The paper shows that the intersection of gender and technology has significant implications not only for women's careers, but also for the greater realm of science policy, operations, and achievement.

Key words; Technology, Innovations, Gender

B2014-25 Transformational Leadership within a University Settings A case of Heads of Academic Departments in the Kenyan Public University Setting

Lydia Ayako Mareri

Abstract

Transformational visionary and inspirational leadership practices of departmental heads can determine levels of organizational citizenship behavior (OCB) of the academic faculty members in a public university setting. The organization and management of public university activities depend on active involvement of academic faculty members because they play a vital role in the university's survival. This implies that university management is incomplete without notable participation of the academic faculty members, whose foundation is laid at the departmental level. Consequently, certain leadership styles have distinct bearing on the levels of obedience, loyalty and participation of employees, which subsequently influence organizational effectiveness. Based on this premise, this paper presents results obtained from a qualitative case study conducted among academic faculty members of one faculty in one of the public universities in Kenya. The purpose of this study was to determine how heads of departments' leadership styles influence the degree of organizational citizenship behavior (OCB) of the academic faculty members within their departments – and by extension – the effectiveness of the university. Data was obtained through in-depth interviews with the sample heads of departments and academic faculty members. The results obtained add empirical support to the assertions that indicators of organizational effectiveness are associated with employees' willingness to go above and beyond their job requirements as indicated by the levels of OCB largely influenced by the leadership styles.

B2014-26 Unsustainable Finances of the Sugar Economy in Kakamega County

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Abstract

This research focused on sugarcane farming; why farmers end up with minimal (if any) benefits from commercialized sugarcane production after laboring for at least one and a half years. Methodologically, the research relied on farmers'/sugar companies' document analysis, oral interactions with farmers and company officials and researcher observation of the research area. The concepts of commercialization, innovation and sustainability were utilized in this research. Commercialization denotes the range of changes embraced by households as a consequence of increased sensitization of their productive systems to the presence of the market. Innovation implies the ability of a people to be inherently dynamic historical actors and not merely amorphous masses of cultivators. Sustainability is the ability to maintain a beneficial relation in the enterprise a people are involved by balancing between the psychic and material returns. The research established that sugarcane transportation was not only controversy ridden; it was also a burden to the farmer often costing at least 30 percent of the farmers' gross income. Moreover, the total deduction accounted for 50 percent of the gross income. These, with the long maturation period of sugarcane in the western sugar belt adversely affected the sugar economy culminating into poverty and a marked absence of development. The research concluded that sugar companies exploited the sugarcane farmers depleting their financial investment base. The

research recommends that sugar companies should introduce mobile weigh bridges for the harvested sugar cane to be weighed on the farms before transportation to the factories. It further recommends a full implementation of the sugar act 2001.

B2014-27 Urban Planning Strategies for Disaster Risk Reduction in Urban Areas In Kenya

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Abstract

Over the last 25 years, many urban areas have experienced dramatic growth as a result of rapid population growth. Despite cities commanding an increasingly vital role in the global economy as centres of both production and consumption, rapid urban growth throughout the developing world is seriously outstripping the capacities of most cities to provide adequate goods and services for their citizens. Governments, international agencies and local authorities have neither adequately recognized rapid growth of small and medium cities nor the deteriorating living conditions for the urban poor. Consequently, these rapid social, economic or environmental changes, have led to disasters or conflicts. Well targeted programmes and policies including disaster risk reduction strategies to build resilience among urban dwellers can play an important role in cushioning populations against disasters. This study sought to find out the current disaster risks prevalent in urban areas; establish the disaster risk reduction strategies being used to mitigate disasters in urban areas; identify the constraints facing disaster risk reduction initiatives and effective urban planning implementation; and to develop disaster risk reduction strategies for enhanced sustainable urban development. The study focused on Eldoret and Narok towns in Kenya with the target population that comprised of residents, government departments and agencies, religious institutions, local authorities, non-governmental organizations, Community Based organizations among others. The information from the study would contribute to enhancement of knowledge in areas of urban planning and disaster reduction through development of theoretical analysis, criticisms and contributions, as well as facilitate various stakeholders including development practitioners, policy makers and the general public embrace appropriate approaches and strategies to ensure sustainable development of urban areas.

Key words: Urban Planning strategies, disaster risk reduction

B2014-28 The Role Of Staff Counseling In Promoting Work Engagement And Productivity At Kabarak University

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Abstract

Significant shifts in the global economy have accelerated the need for organizations to find innovative ways to address new technological, demographic and marketplace realities. These shifts have also forced institutions of higher learning in Kenya to re-evaluate costs associated with talent, necessitating a need to maximize productivity with minimal work force. At Kabarak University, employees are expected to be proactive, show initiative, take responsibility for their own professional development and to be committed to high quality performance standards. These expectations place high job demands on the staff and in so doing predispose them to burnout. However, there is no comprehensive staff counseling programs aimed at helping the human resource develop their positive psychological capital that would inoculate them from psychological indisposition and thus boost work engagement for higher output. This paper explores the role of counseling in promoting work engagement and increasing productivity at Kabarak University. The article theorizes that engagement, conceptualized as the investment of an individual's complete self into a role, is a significant factor in job wellness and correlates positively with counselling. Mixed methods research was used to conduct the study. Secondary data was augmented with the participant observation data collection procedure. Qualitative and quantitative data analysis was done using SPSS 22. It was established that job engagement is a human resource concern that can be strengthened by staff counseling programmes. The job specification for the professional counselors within the university precludes their active involvement with psychological welfare of staff. HRD researchers seeking to conduct original research in universities, and practitioners interested in creating greater levels of engagement in their organizations will find the discussion and implication sections valuable.

Key words: staff counseling, productivity, engagement, attrition.

B2014-29 Effectiveness of Marketing Mix Elements in Enhancing Students' Enrolment in Institutions of Higher Learning: Case Study of Two Private Universities in Kenya

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Abstract

In recent years, higher education has been experiencing a new trend of competition for students among universities. Competitive pressure has forced universities to search for marketing strategies to attract students in their respective recruitment markets. Therefore, a study of important attributes that influence students' choice of university is an important endeavor. The purpose of this study was to assess the extent to which Institutions of higher learning (IHL) can

use the marketing mix strategy to attract and enroll students. A probability simple random sample of 100 continuing undergraduate students from two private universities participated in the study. A questionnaire was used as the research instrument and the gathered data was analyzed using Statistical Package for Social Science (SPSS). The findings of each marketing mix elements 7Ps (product, price, place, promotion, physical evidence, process, people) were grouped in relation to the respondents' extent of agreement. Of the 7 Ps, the product element was rated highest by the respondents as a key factor in attracting students to enroll in an institution followed by physical evidence and place in that order whereas the price element was rated least. These findings could be used by IHL to adapt their marketing mix to enhance students' enrolment.

Key words: higher education institutions, marketing, marketing strategies, students, marketing mix strategies

B2014-30 Factors Affecting Non-Performance of Personal Loans in Banking Industry: Case Study of Tier One Banks In Kenya

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Abstract

Banks in Kenya experience high levels of non-performing loans. This trend threatens viability and sustainability of banks and hinders the achievement of their goals. The purpose of this study was to find out the factors affecting non-performance of personal loans and hence the profitability of banks in Kenya. In view of the critical role banks play in an economy, it was essential to identify the factors that affect the performance of these institutions. Some of the factors that the researcher looked at included growth in GDP, unemployment, interest rates and inflation. This is because non-performing loans can affect the ability of banks to play their role in the development of the economy. A case study research design of tier one banks in Kenya was employed. To achieve the objectives of the study, secondary data was collected from CBK and Kenya National Bureau of Statistics (KNBS) offices. Quantitative techniques were used to show the relationship between unemployment, GDP, inflation and interest rate spread on personal loan non-performance. A regression analysis was also carried out to analyze the impact of selected independent variables on non-performance of personal loans for the period 2000 to 2012. The relationship between the four economic variables; GDP, Inflation, Unemployment and Interest rates is strong as depicted by the correlation coefficient of 0.68. GDP and unemployment are negatively related to loan non-performance while inflation and interest rates are positively related to loan non-performance. The study is of great importance to the banks because it will assist the management to understand the factors that if not dealt with, will affect the performance of personal loans and which eventually affect the profitability of the banks.

Key words: Non-performing loans, Profitability in banking industry, unemployment, inflation, Interest rates

B2014-31 Analysis of the risk factors that affect the youth and women enterprises fund

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Abstract

In most cases, the macro-economic structures of a country are dependent on sound systems and mechanisms such as capital markets, international trade and government spending that are perceived to be the drivers of that economy. However, underlying factors such as unemployment among youths, healthcare and other labor related factors bear more weight than is commonly perceived. As a key pillar upon which the development structures of a country are held, the magnitude of youth and women enterprises is shown by its prioritization in development goals. For this to be achieved the financial systems aligned to job creation, women empowerment and youth funding have to be right. This research makes a statistical analysis of the risk factors that affect the youth and women enterprises fund that is open to prior contribution to an insurance company. The models for these factors are determined thereby allowing forecasting of the trends that are to be expected. Using time series and multiple regression models, the project correlates these different factors to give a long term interest rate to be used in modeling. The final model makes use of actuarial techniques in premium calculation hence good application of actuarial science course.

SYMPOSIUM L2014

L2014-01 County Financial Governance and Public Participation

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ABSTRACT

The paper examines the implementation of participatory mechanisms in county financial management stipulated by the new Constitution and enabling laws and the extent to which implementation progress has impacted on democratic governance. It reviews citizen representation, involvement and institutional capacity and environment in evaluating performance of County implementation process. The study relies largely on desk research, including scholarly journal articles, books, the Constitution and enabling law as contained in County Government Act, Public Financial management Act, County Public Financial Management Act, Public Participation Bill and county policies on financial management. Complimentary to review of literature, the study undertaken through interviews of citizen's on their participation in decision making on financial governance matters at different county government levels. The study also employed uncontrolled observational methods at sub-county public forums in collecting necessary data in evaluating levels of participation in line with the study objectives. The study reveals that there is considerable progress in establishment of participatory initiatives in line with new Constitutional dispensation, most notably the holding of public forums on county fiscal strategy paper. However, participation mechanism was affected by lack of civic awareness, technicality of budgetary process, inadequate financial literacy, under-representation at grass root levels, low capacity and dominance of political representatives. The challenges to the existing participatory processes in place result in an incomplete and weak governance structure with little contribution to citizen's entitlement to consolidation of democracy at the local level. To ensure benefits of citizen involvement in decision making at the local level as envisaged in the new Constitution, robust civic awareness ought to be conducted alongside strengthening capacity of county Assembly to hold executive into account.

Key words: Constitution; Democratic governance; participation; county finance

L2014-02 Governance under the New Constitutional Dispensation

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Abstract

The 20th of August 2010 promulgation of The New Kenyan Constitution in a grand ceremony at the iconic *Uhuru* gardens resuscitated dead hopes of a new and vibrant nation. The document subscribed to all instruments of international human rights, cleaned up governance by providing a strong fourth arm of government but most significantly, created devolution, complete with a

bicameral legislature. This paper explores governance under the New Constitution evaluating its pros and cons while demystifying the inherently absurd generality that ours is an immaculate law. It tackles the distinct roles, checks and separations between the four arms of government, the operation of county governments, the inter-relationships between central and the county governments, implementation of devolution and affirmative action, the problems encountered during implementation while suggesting solutions to the same. For this discourse, the paper relied heavily on the Independence Constitution, The New constitution 2010, scholarly articles and research papers on the same topic and demographic data. This research establishes that:

1. The New Constitution contains many loose ended provisions which make implementation burdensome.
2. Many Kenyans do not understand government under the new system.
3. For all its good provisions, the new law totally disregarded the question of autochthony and proposals for prior changes during creation.

The sole conclusion is that governance under The New Constitution ought to have been structured in a slightly different manner. From the above, the paper recommends restructuring of devolution, more powers for the senate, clear definition of the inter-relationship between the four arms and thorough civic education on governance for the populace.

Key Words: Constitution, devolution, autochthony, rule of law, separation of powers, legislature, executive.

L2014-03 THE DEVOLUTION DEBACLE; THE BATTLE FOR SUPREMACY

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Abstract

That the constitution of Kenya 2010 is among the most outstanding institutions in the world stands undisputed fact, however, there are some notable lacunas in it that warranting the inevitable battle for supremacy between various constitutional bodies like the recently witnessed tussle between the senate and the national assembly. Several questions arise; which house is the lower house and which one is the upper house? Which house has more powers than the other? Could the constitution of Kenya 2010 have duplicated some state offices? Is the Kenya's work force bloated? Is Kenya ready for the contemplated kind of governance in the constitution of Kenya 2010? An attempt to answer these among other questions and to navigate through the plethora of remedies in a quest for better of the good we have is the aim of this research paper.

Keywords: Lacuna, devolution, tussle, senate, council for governors and national assembly

L2014-04 An analysis of citizens' participation in public administration in Kenya

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Abstract

Kenya is a democratic Republic and the philosophy of justice, equality, and liberty are enshrined in its constitution. The democratic principles flow from the Preamble of the Constitution itself. The theory and practice of public administration is increasingly concerned with placing the citizen at the centre of policymakers' considerations, not just as target, but as agents that have both rights and duties. The aim is to design services that respond to individuals' needs and are relevant to their circumstances recognizing that citizen participation and civic engagement are the building blocks for good governance. Citizens should seek greater accountability through increased consultation and by monitoring and assessing performance externally and mutually. Relying on examination of literature including an in-depth review of existing public involvement legislation, regulations and guides, the paper sought to describe trends in citizen participation in Kenya and develops a citizen engagement framework reflecting best practice in the administration of public services through broadly tracing challenges, experiences and achievements of the citizen participation. It was vital and inevitable that an interim assessment of citizen participation be undertaken to determine whether the program is on course in terms of achieving the objectives for which it was put in place. This article is composed of four main sections: first the author conducts a quick inventory of existing policy frameworks for citizen participation and summarizes the shortcomings of current practices, then, explores a field of practice known as deliberative democracy and provides some examples of where citizens engage face-to-face in addressing community issues. Third, the author provides a summary of key features and techniques for deliberation within the proposed framework. Finally, the author concludes the article with a set of recommendations expected to encourage public deliberation in the activities of government and support the development of an "infrastructure of engagement" throughout government.

L2014-05 Recasting the Quest for Devolved Governance of Agriculture in Kenya

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Abstract

Kenya's Constitution of 2010 has enunciated several reforms, key amongst them being; devolution of various sectors including agriculture. The Fourth Schedule anchors the devolved agriculture framework by allocating the national government exclusive responsibility of agricultural policy formulation whilst the county government; delivery of agricultural services. Both levels of government are to act in tandem with the objects of devolution encapsulated under Article 6 and 174 (h) namely; the recognition of their distinct and inter-dependent relations and the decentralization of State organs. Strikingly, however, the Constitution largely lacks clear specifics on the implementation framework for devolved agriculture. Accordingly, the national government enacted the Agriculture, Fisheries and Food Authority Act, 2013 (AFFA Act) as the blueprint for devolved agriculture. However, AFFA Act is clogged by systemic weaknesses that encroaches on and remains aloof of the functional and institutional distinctiveness of counties. Specifically, AFFA Act fallaciously devolved agriculture by giving state corporations over-

arching roles over counties. Therefore, the paper argues for a shift or decentralization of power and control of agriculture from traditional performance management models within state corporations, to counties. Accordingly, the paper critically assesses the extent to which the AFFA Act promotes the objects of devolved governance enshrined in Kenya's Constitution. The paper recommends recasting AFFA Act to recognize the distinct roles of counties in Kenya's quest to devolve agriculture.

Key words: devolution, agriculture, counties, national government, state corporations, governance

L2014-06 Rethinking the use of Bilateral Investment treaties as tools for sustainable development: The Kenyan Experience

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Sustainable development is a fundamental principle of International Law. It is closely related to and [should be] a core objective of any country seeking to address developmental concerns. Curiously, however, a critical review of [legal] literature reveals seemingly little attention given to the actual assessment of 'how and to what extent' existing Bilateral Investment Treaties (BITs) have addressed sustainable development; especially in relation to BITs involving developing countries such as Kenya. Accordingly, taking Kenya as an illustrative case, this study makes a critical assessment of how and to what extent the BITs concluded between Kenya, the Netherlands, Britain, and Germany have addressed sustainable development. The study argues that most (if not all) BITs remain silent on sustainable development. Further, the methods of addressing sustainable development is premised on protecting investors and their investments based on the *implied* assumption is that protection will attract foreign investment necessary for financing sustainable development. Nevertheless, as the study highlights, difficulties have arisen in measuring how revenue generated from foreign investment has contributed to the sustainable development in Kenya. Accordingly, the study urges a collectively rethinking of the usage of BITs as a tool for sustainable development by recasting the BIT structure to make sustainable development an *explicit* objective.

The study is divided into three sections. Section one examines the international law principles on sustainable development and extracts indicators of sustainable development as the conceptual framework for the study. Section two examines the nature, structure and importance BITs as tool for sustainable development. Section three, with the aid of tabulations, assesses how and extent to which the Kenyan BIT's have incorporated the indicators of sustainable development.

Keywords: Sustainable development, Foreign Investment, Bilateral Investment Treaties, foreign investor, Kenya, developing countries

L2014-07 The Challenges of Open and Distance Learning in Kenya: The Case of Public Universities

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Abstract

Kenyan education policy is based on a number of legislations including the constitution of Kenya (1961), Education Act (1968), Children Act (2001) and sessional paper no. 11 of 2005 on policy framework for education and training, among others, all of which commit the government to the provisions of at least 12 years of compulsory, free and continuous schooling to the Kenyan children (Government of Kenya, 2008). So far, however, no specific act or directive deals with Distance learning per se. Our policy on DE are far behind South Africa and even post-conflict Rwanda who have prepared very proactive policy documents to increase access via open and distance learning. This due to various structural challenges that this paper attempts to discuss.

Key words; Distance Education, ODL, public universities,

L2014-08 The Youths Involvement In Governance Through Public Participation Under The New Constitution In Kenya

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Abstract

This paper examines the involvement of the youth in governance in the economic sphere through public participation under the new constitution in Kenya. The extent of such involvement is crucial in assessing how, and how far the constitution may be used as a tool of promoting the interests of the youth in this country. The economic sphere is particularly important mainly because a vast majority of the youth are unemployed and prospects of becoming entrepreneurs raises more questions than answers. For instance, whenever the youth may want to start small businesses they lack necessary training and expertise. In such a scenario, questions such as how and who should fund them remain problematic. The paper focuses on the various legislative and policy framework laid down by the two consecutive regimes under the new constitution: the coalition and jubilee governments. It then narrows down into the county governments' compliance to ensuring public participation of youth in economic sphere as a way of empowering them. The research draws from the constitution of Kenya, various Acts of parliament, the jubilee government manifesto, Vision 2030, court decisions, media reports and interviews with the youths. The aim is to establish the modes in which the youths are involved in public participation, the extent to which they are involved and the effectiveness of such participation in influencing government decisions. Lastly we critique the jubilee government on the implementation of its policies by sidelining the youth and provide the best practices acquired

from other jurisdictions and give recommendations that would assist in bridging this gaps in order to attain vision 2030.

L2014-09 Civic Education and Participatory Leadership: A Case Study of Selected Constituencies in Three Counties in Kenya.

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Abstract

Participatory leadership is the hallmark of democracy. Kenya's 2010 constitution underpins participatory leadership in many ways. The whole essence of devolution is to involve more stakeholders in the running of the government. Multiparty democracy as enshrined in the constitution allows for adequate participation of various political parties in elections which installs leaders of state and government in Kenya. Democratic election is, putting all other factors constant, one sure way of installing leaders in power through popular competitive voting process. Yet in the Kenyan situation, elections are characterized by rigging, voter bribery, ethnic loyalties, and violence among many electoral malpractices. Consequently, the electorate is more often than not discontent if not disillusioned after every election. The study seeks to investigate the relationship between civic education and the type of leadership that the government of Kenya gets after a parliamentary general election. And whether the electorate is educated about their rights and privileges as voters and if they know responsibilities of leaders they elect and if they are aware of the sanctions they have should leaders perform dismally. Through critical and in depth perception, the study will gauge whether or not information that voters have on the qualities of the leaders whom they vote for guides them in their selection of their leaders or if the aforementioned contextual factors takes an overriding role. The study will used both quantitative and qualitative research methods which includes the use of questionnaires, interviews and focus Group discussion. Purposive sampling on respondents on leadership position and random sampling on the rest of the respondents will be employed. The findings will be analyzed using Statistical Packages for Social Sciences and other relevant tools of analysis.

Key words: Civic Education, Good Governance, voter Education, Democracy and civil society

L2014-10 The Influence of Culture on Leadership in 21st Century Society: A Case of Kenya's Political Leadership

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Abstract

This paper describes how culture affects leadership in the Kenyan context. The kinship and subsequent dependency culture which is deeply embedded in African cultures largely promotes the evils of tribalism. Kenya's political leaders ascend to power through 'democratic' elections as provided for in the constitution. But the culture of corruption plays a huge role in determining who and who does not ascend to power. Leadership is an integral part of human life both in developed as well as underdeveloped societies and cultures. However, there are scholars who question how much a leader's culture influence his leadership style. Studies show that for every study that doubts if a leader can impact on the group he leads; several more have established that leaders have significant impact on the group's outcome. Yet a leader does not act in isolation. A leader's behavior is largely influenced by the culture he subscribes to. This paper seeks to delve into the tenets of how socio political cultures of leaders influence their behavior and subsequent impact of the political regime in Kenya. My discussion further looks into the theories of leadership and correlates them to the Kenyan situation.

Key words: Leadership, culture, political culture, organizational culture and democracy