



## Directorate of Research & Postgraduate Support

*Produced by Research Communications*

# Research BULLETIN

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Monday, 14<sup>th</sup> October 2019

### New on Research @MMUST



#### GEF-UNEP-AGRA Project

Alliance for a Green Revolution in Africa (**AGRA**- implementors) in collaboration with Global Environmental Facility (**GEF**- funders) through UNEP, and in nexus with Kenya Agriculture and Livestock Research Organization (KALRO); and with representation from MMUST among other stakeholders have embarked on a 5 years project “*Scaling up Sustainable Land Management and Biodiversity Conservation to reduce environmental degradation in small scale agriculture in Western Kenya.*” The project is being implemented in 3 counties; Kakamega, Nandi, and Vihiga with the goal of mainstreaming sustainable land and forest management (SL & FM) practices across the landscapes of Kakamega -Nandi Forest ecosystem through reduced land degradation and improved soil fertility that would lead to increased farm productivity and income. Glad to be part of the change making. Glad to be part of the change making, especially, in providing high level strategic and policy guidance in the implementation of the project.

### In the News

#### Plagiarism costs a lecturer Ph.D. Degree

<https://nairobi.news.nation.co.ke/featured/kenyatta-university-revokes-lecturers-phd-over-plagiarism>

MMUST too does not condone academic fraud, it has put mechanism in place to ensure high academic standards.

### Accomplishments

Congratulations, **Dr. Patrick Ojera!** For being selected as an Outstanding Author Contribution in the **2019 Emerald Literati Awards**. Dr. Ojera’s book chapter on ‘**Indigenous Financial Management Practices in Africa: A Guide for Educators and Practitioners**’ published in **Advanced Series in Management** was chosen as a winner as it is one of the most exceptional pieces of work the team has seen throughout 2018. You can view this chapter:

<https://www.emerald.com/insight/content/doi/10.1108/S1877-63612018000020005/full/pdf?title=indigenous-financial-management-practices-in-africa-a-guide->

[for-educators-and-practitioners](#)

For information on Emerald, Literati, please visit:

<https://www.emeraldgrouppublishing.com/authors/literati/index.htm>.

#### **SDMHA**

**Nduti D. M.**, Iteyo C., & Onkware K. (2019). Cross border smuggling of food commodities from Uganda influencing socio economic status of household of Busia town, Kenya. *Sumerianz Journal of Social Science* 2 (10). 186-194. <https://www.sumerianz.com/?ic=journal-home&journal=28&info=archive-detail&month=10-2019&issue=10&volume=2>

**Lopodo, M. P.**, Wakhungu, J.W., & Edome, P. (2019). *Early warning system and drought vulnerability in Ilemi, Turkana, Kenya* -LAP LAMBERT Academic Publishing Language: English, ISBN-10: 3659771678, ISBN-13: 978-3659771675). <https://www.amazon.com/Warning-System-Drought-Vulnerability-Turkana/dp/3659771678>

**Lopodo, M. P.**, Wakhungu, J.W., & Edome, P. (2017). Environmental drought effects on human vulnerability to the Turkana Nomadic Pastoral Population of Ilemi Triangle Region, Turkana County In The Northern Kenya. *International Journal of Innovative Research and Advanced Studies (IJIRAS)* 4(11), [http://www.ijiras.com/2017/Vol\\_4-Issue\\_11/paper\\_71.pdf](http://www.ijiras.com/2017/Vol_4-Issue_11/paper_71.pdf)

**Lopodo, M. P.**, Wakhungu, J.W., & Oteng'i, S,B.B.(2019). ILIMI Model of Improving Turkana Nomadic Pastoralists Of Ilemi triangle indigenous knowledge on drought early warning system, Turkana County, Kenya. *International Journal of Innovative Research and Advanced Studies (IJIRAS)*. 6(5), [http://www.ijiras.com/2019/Vol\\_6-Issue\\_5/paper\\_11.pdf](http://www.ijiras.com/2019/Vol_6-Issue_5/paper_11.pdf)

**Lopodo, M. P.**, Wakhungu, J.W.,& Oteng'i, S,B.B.( 2019).Drought coping mechanisms among the turkana nomadic pastoral community of Ilemi Triangle Region of Northern Kenya . DOI: <https://doi.org/10.22158/rhs.v2n2p104>.

**Lopodo, M. P.**, Wakhungu, J.W.,& Oteng'i, S,B.B.( 2019).Causes of Drought Vulnerability and Indigenous Drought Early Warning Methods among the Turkana Nomadic Pastoralists of Ilemi Triangle Region of Northern Kenya , <http://www.scholink.org/ojs/index.php/rhs/article/view/951>

**Ngeny, J.K.**, Obiri, J.,& China, S.(2019). Community participation in environmental conservation in Kakamega County Kenya.

#### **SOBE**

**Messo, J.R.O.**, & Byaruhanga, J.( 2019).Earnings announcement and the performance of security prices of companies listed on the Nairobi securities exchange , Kenya. *International Journal of Business and Management*. 14(9). 2019 ISSN 1833-3850 E-ISSN 1833-8119. [file:///C:/Users/Caroline%20Natetho/AppData/Local/Packages/Microsoft.MicrosoftEdge\\_8wekyb3d8bbwe/TempState/Downloads/5d63c81a7f81d%20\(1\).pdf](file:///C:/Users/Caroline%20Natetho/AppData/Local/Packages/Microsoft.MicrosoftEdge_8wekyb3d8bbwe/TempState/Downloads/5d63c81a7f81d%20(1).pdf).

**Simiyu, J.**, Egeessa, R. W., & Byaruhanga, J. (2019). Auditing practice and service delivery of county owned water organizations in Western Kenya. *The Strategic Journal of Business & Change*

*Management*, 6 (4), 210 – 216.

<http://strategicjournals.com/index.php/journal/article/view/1383>

**Simiyu, J.**, Byaruhanga, J, & Egessa, R. W. (2019). Transparency and accountability practices and service delivery of county owned organizations in western Kenya. *Elixir Strategic management*. 135(2019)53721-53725. [www.elixirpublishers.com](http://www.elixirpublishers.com)

#### SCI

**Ndia, G.J.**, Muetha, M.G., & Omieno, K. K. (2019). Complexity metrics for Sassy cascading style sheets. *Baltic Journal Modern Computing*, 12(1), 1-19.

**Ndia, G.J.**, Muetha, M.G., & Omieno, K. K. (2019). A survey cascading style sheets complexity metrics. *International Journal of Software Engineering and Applications (IJSEA)*. 10(3). <http://airconline.com/ijsea/V10N3/10319ijsea03.pdf>

#### SPHBS&T

Situma, J., Ahoya, B., & **Musungu R.** (2019). Awareness and utilization of mother child health booklet by health workers and mothers in western Kenya. *International Journal of Innovative Research*, 8(5). ISSN 2278 – 0211 (Online) [http://internationaljournalcorner.com/index.php/ijird\\_ojs/article/view/145019](http://internationaljournalcorner.com/index.php/ijird_ojs/article/view/145019)

Situma J., **Keseko E.**, Nabwoba. R. (2019). Level of exposure to risk factors for non-communicable diseases among youth in Bungoma County, Kenya. *International Journal of Multidisciplinary Academic Research*, 7(1), 38-43.

Situma, J., **Keseko E.**, **Musungu, R.** (2019). Nutrition security of households utilizing wooden lockable fish ponds in peri-urban areas of Busia County, Kenya. *International Journal of Research in Agricultural Sciences*, 6(4), 124-128. <http://www.ijras.com/index.php/archive?view=publication&task=show&id=345>

Situma, J., **Keseko, E.**, **Musungu, R.** (2019). Utilization of wooden lockable fish ponds for enhanced household food security in peri-urban areas of Busia County, Kenya. *International Journal of Recent Scientific Research*, 10(8), 34166-34169. DOI: <http://dx.doi.org/10.24327/ijrsr.2019.1008.3834>.

Situma, J., **Musungu, R.L.**, & **Agvania, C.** (2019). An Evaluation of the National School Meals and Nutrition Strategy in the Western Region of Kenya. *International Journal of Multidisciplinary Academic Research*, 7(1), 44-51.

## Funded Projects

**Congratulations! Mr.** Masinde Joseph Wangila, a Ph.D. student under the supervision of Dr. Catherine Aura and Dr. Martin Wanjala, both from the Department of Science and Mathematics Education, conducted a funded research on “*Influence of software-oriented concept mapping on performance in electrochemistry among secondary school students in Kakamega county, Kenya.*”

#### Overview:

The study instigated by the urgent need for effective strategies in the teaching and learning of difficult and abstract Chemistry concepts, whose lack thereof has occasioned dismal performance by students

in the subject nationally for the last ten consecutive years. The aimed at finding out the influence of using Software-Oriented Concept Mapping (SOCM) on performance in electrochemistry among secondary school students in Kakamega County, Kenya. The study is grounded on the Meaningful Learning Theory, implemented through a mixed methods approach. Quasi-experimental research design was employed using non-randomized pretest-posttest with control group as a model. Approximately 20,000 form four students from secondary schools in Kakamega County formed the target population. The sample comprised of approximately 2,000 students, selected by multi-stage sampling. Independent variables included instructional strategy at two levels; software-oriented concept mapping and the conventional instructional strategies. The dependent variables were academic achievement, experimental skills, self-efficacy, attitude and motivation. The pilot study was done in two secondary schools within Kakamega County. Observation check lists, questionnaires and achievement tests were used to collect raw data. Reliability of these instruments was assessed via the internal consistency alpha coefficients method, while their validity was established using the Rasch Model. Frequencies and percentages were employed to analyze the raw data descriptively, while parametric tests namely;  $3 \times 1$  factorial and one-way ANOVAs, ANCOVA, bivariate Pearson's Correlation and Hierarchical Multiple Linear Regression were employed to test the study's null hypotheses. The findings have instructional implications in science education.

#### **Probable date of completion**



**Sponsored by: National Research Fund**

**Congratulations!** Mrs. Metrine Sulungai Wambani a Ph.D. student under the supervisorship of Prof. Maurice Amadalo and Dr. Martin Wanjala both from the Department of Science and Mathematics Education, conducted a funded research on *Computer Interactive Multiple Mice Technique Versus Conventional methods of Instruction and its Effect on Learners' Performance in Fractions in Kenya Public Primary Schools.*

#### **Overview:**

Mrs. Wambani's study investigates the effectiveness of computer interactive multiple mice technique as compared to conventional methods on learners' achievement, classroom interaction and motivation in learning fractions. Studies attribute poor performance in mathematics in public primary schools to teacher centered teaching methods. However few researchers have tried out interventions like computer interactive multiple mice technique that has demonstrated financial, interactive and collaborative learning benefits for enabling learners in resource-constrained schools to share one computer with their own mouse. Using Stratified, purposive and simple random sampling techniques, a sample of 518 learners from 12 schools was selected. Quasi experimental pre-test, post-test, non-equivalent groups design were used. Class observations were used to provide comparative findings to supplement the quantitative data. Computer interactive multiple mice technique was used in the experimental group and conventional methods in the control groups. Mathematics Achievement Test 1 was used as a pretest in both groups. Mathematics Achievement Test 2 helped to determine learner achievement after instruction. Mathematics Lesson Observation Checklist (MLOC) to gauge learners' classroom interactions. Learner Motivation Questionnaire (LMQ) was used to determine learners' motivation towards learning fractions. To test the hypotheses, inferential statistics (ANOVA, t-test and Chi square) were used at significance level of .05. Qualitative data was summarized using descriptive statistics (frequencies, percentages, mean and standard deviation) and presented using tables. Face and content validity was determined by experts in mathematics subject. Test retest reliability method was deployed to find reliability for the instruments. Reliability was established using Pearson's

Product Moment of Correlation Coefficient. The findings have implication on the learning of mathematics in public primary schools of Hamisi Sub County.

**Probable date of completion**

Sponsored by: National Research Fund



## Funding Opportunities



### Commonwealth Scholarships in the United Kingdom 2020

Thirty seven (37) full scholarships are available for postgraduate studies for Kenyan students tenable in UK institutions of Higher Learning starting in October 2020. Eighteen (18) for PhD and (19) are for Master Degrees. See the link for more information.

<http://www.eafinder.com/ke/united-kingdom-commonwealth-scholarships-for-kenyan-students-in-uk-2019-2020/>

Or <http://csecuk.dfid.gov.uk/apply/applicants>



### Comic Relief: Funding for Improving Mental Health and Wellbeing in Kenya

**Deadline 18 October 2019**

For more information, please visit

<https://www.comicrelief.com/funding/funding-opportunities/improving-mental-health-and-wellbeing-kenya>



### Deutscher Akademischer Austauschdienst German Academic Exchange Service

Check out lots of funding opportunities for students, graduates, and researchers both by DADA and other funding organizations in Germany.

[https://www.daad.de/deutschland/stipendium/datenbank/en/21148-scholarship-](https://www.daad.de/deutschland/stipendium/datenbank/en/21148-scholarship-database/?status=2&origin=169&subjectGrps=&daad=&q=climate&page=1&detail=57516492&target=156&stb=1#bewerbung)

[database/?status=2&origin=169&subjectGrps=&daad=&q=climate&page=1&detail=57516492&target=156&stb=1#bewerbung](https://www.daad.de/deutschland/stipendium/datenbank/en/21148-scholarship-database/?status=2&origin=169&subjectGrps=&daad=&q=climate&page=1&detail=57516492&target=156&stb=1#bewerbung)



### African Union Research Grants

The African Union Commission is seeking proposals for research focusing on the following thematic priorities articulated in Africa's Science and Technology Consolidated Plan of Action (CPA) and its Lighthouse Projects: (a) Post-harvest and Agriculture, (b) Renewable and Sustainable Energy, and (c) Water and Sanitation in Africa.

The programme is financed through the Financing Agreement between the European Commission and the ACP Group of States under the ACP Research for Sustainable Development Program of the 10th EDF Intra-ACP Envelop.

For more information, please visit <https://www.advance-africa.com/African-Union-Research-Grants.html>



**Academia Kenya** is a single platform for disseminating relevant and timely information to the academic research community in Kenya. Currently, lots of grants and funding opportunities are active for application.

For more information, please visit <https://academia-ke.org/grants-and-opportunities/>



International Development Research Centre

Centre de recherches pour le développement international

### **The International Development Research Centre (IDRC)**

Is offering grants, funding, and awards to researchers and institutions to find solutions for global development challenges. Through calls for research proposals, we fund projects that aim to bring employment, food security, health, peace, and prosperity to developing regions of the world.

#### **Global call for inaugural IDRC RQ+ College of Reviewers :**

Apply to join independent RQ+ College of Reviewers to assess quality of research across IDRC's programs.

**Deadline: October 16, 2019 by 23:45 (EDT)**



**Funding  
research site**

### **Funds 4 Africa. Org. Provides funding opportunities to impact your communities**

The active calls include:

#### **Right Sharing of World Resources | Kenya Women and Gender **90 days left****

RSWR supports income-generating, self-employment projects for poor women who are members of a self-help group. The project must include a revolving loan.

For more information, please visit- <https://funding-opportunities.org/en/opportunity/666/right-sharing-of-world-resources-kenya->

**Submit your proposal to <https://www.rswr.org>**

### **Climate and clean energy projects and businesses in Sub-Saharan Africa and Asia **438 days left****

Do you have a great climate change adaptation or clean energy project, but have you had difficulty attracting investment? PFAN can help! PFAN has worked with over 500 projects since its launch in...

For more information, please visit <https://funding-opportunities.org/en/opportunity/549/climate-and-clean-energy-projects-and-businesses-in-sub-saharan-africa-and-asia>

**Submit your proposal to <https://pfan.net/submit-a-proposal/>**

### **The Implementer-Led Design, Evidence, Analysis and Learning (IDEAL) Activity -All countries Nutrition Agriculture, **15 days left**, \$50,000**

Over the past decade, FFP made significant investments in

strengthening implementer capacity in a number of key technical areas central to food and nutrition security (e.g. Agriculture, WASH. For more information, please visit-

<https://funding-opportunities.org/en/opportunity/730/the-implementer-led-design-evidence-analysis-and-learning-ideal-activity>

Submit proposal to <https://www.fsnnetwork.org>



## Ministry of Education

### Ministry of Education Scholarship

The Government of Kenya through the ministry of Education has lots of scholarships. For more information, please visit

<http://www.education.go.ke/index.php/downloads/category/14-government-scholarships>



### IBM Ph.D. Fellowship Awards Program 2020/2021 for Ph.D. students Worldwide (Fully funded.)

For more information, visit

<https://www.currentschoolnews.com/fellowship/fully-funded-ibm-ph-d-fellowship/>



### Over 15 fully -funded Government Scholarships for International Students globally

See <https://scholarshipstory.com/government-scholarships/>

See this link for more information

[http://aripd.org/aripd/index/ongoing\\_research](http://aripd.org/aripd/index/ongoing_research)

## Announcements!



**Certificates for participation** in the 13<sup>th</sup> Multi- Disciplinary International Conference held at MMUST on June 19<sup>th</sup> -21<sup>st</sup>, 2019 are ready for pick up. Kindly come in person with a personal identification.



**Certificates for participation** are available for those who attended the First Pan African Research Congress held at the Grand Royal Swiss Hotel, Kisumu between 18<sup>th</sup> -21<sup>st</sup> June 2018.



**Journal of Science Technology Education and Management (J-STEM) Vol. 8 No.1**, proceedings of the 10th International Conference held in 2016 are out and available for purchase at the Directorate of Research and Postgraduate Support office.



### **Panel Data Analysis Workshop November 18th -21st, 2019.**

The School of Graduate Studies & Research would like to invite you to a 4-day Panel Data Analysis workshop. The event will be at the Kenya School of Monetary Studies, along Thika Rd. For more information, please visit <https://www.kca.ac.ke/panel-data-workshop>

## Resources

## **Proposal Writing Guide**

[http://www.ku.ac.ke/riosite/images/docs/updated\\_Guide\\_for\\_Writing\\_a\\_Fundable\\_Proposal.pdf](http://www.ku.ac.ke/riosite/images/docs/updated_Guide_for_Writing_a_Fundable_Proposal.pdf) (Adopted from K.U. ). **Also, be on the lookout for the face-to-face training- coming soon.**

**Journal Resources** - a site that ranks journals by quality and h-index

[www.scimagojr.com/journalrank.php](http://www.scimagojr.com/journalrank.php)

See also the selected journals under the Directorate of Postgraduate Studies of MMUST (<http://mmust.ac.ke/directorates/dps/>).

## **We want to hear about great research @ MMUST**

For this bulletin we accept news items about researchers and their teams from schools, campuses and agencies within the MMUST research enterprise, including honors, funding, publications, presentations, and appearances in news media.

***You can visit with us*** at the Directorate of Research and Postgraduate Support (ABA #409)- in person

Or Email [directorrel@mmust.ac.ke](mailto:directorrel@mmust.ac.ke)

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[www.mmust.ac.ke](http://www.mmust.ac.ke)