

# A Weekly Digital Publication of Masinde Muliro University of Science and Technology Vol 2. Issue 5: 10th February to 16th February 2019

## **Enhancing Research Culture Through the Melting Pot**





**Inside: Women in Science & Engineering** 

- ☐ Career Week 11th March 2019
- ☐ National Youth Summit- 18<sup>th</sup> March 2019





### **Editorial**

Dear MMUST Community,

We are glad to bring you this edition of the MMUST NewsPost.

We particularly highlight the African Women in Science and Engineering (AWSE), MMUST Chapter, visit to Lusengeli Secondary School in Vihiga and the hope ignited out of this visit.

We also bring you the first Melting Pot Research Seminar of 2019 and the different researches presented by young and upcoming scholars.

Thank you for being ardent readers of the *NewsPost*.

Together, let us tell our stories.

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# **Quality Research Solution to Societal Challenges**

#### By Wangari Mary Wambugu

The Melting Pot Research Seminar, organized and coordinated by the Directorate of Postgraduate Studies (DPS), was held on Friday, February 15, 2019. The Seminar is an innovation of MMUST which is designed to enhance the research culture at the University to provide an opportunity for researchers to network, have a forum for mentors and mentees as well as have high powered guests to impact knowledge on students.

In his presentation during the seminar, Prof. John Obiri, the Director of Postgraduate Studies, discussed on how the Directorate enhances the quality of research in MMUST.

'The Directorate has a Board of Management whose work is to strengthen and facilitate research, provide support, strengthen postgraduate scholarships and ensure that graduates are able to bridge gaps between them and professionals', he said.

The Directorate is also responsible for advising and admitting postgraduate students, examination and records management as well as ratifies proposals, supervise students, and approve deferment of studies or change of study mode. Prof. Obiri highlighted that lack of fees, marriage, lapsed work-study leave and extended holiday breaks as some of the reasons that heavily affect postgraduate students and their studies. He also insisted on the importance of research collaboration and networking.

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### Melting Pot Seminar

The Seminar was graced by several upcoming scholars who shared their research works. Dr. Maximilla Wanzala from the Department of Public Health gave a presentation on the contribution of devolved governance on health systems capacity to provide healthcare services in Kakamega County. From the presentation, it was learnt that Kakamega is among the counties that have the worst health indicators in Kenya. Dr. Wanzala explained that the health of system comprises the community households and the required facilities in referral hospitals. The study established that service delivery was the best performing health system building block compared to health workforce, health financing, health governance medical supplies in a devolved and government environment.

Dr. Edwin Kanda, a PhD student from the University of Kwa Zulu Natal in South Africa, and a member of the Department of Civil and Structural Engineering at MMUST, gave a presentation on Moisture Irrigation Technology. This technology, which originated from China, provides a solution to water-food nexus problem.

'The food production and supply chain accounts for about 30% of total global energy consumption. This technology, therefore, ensures production of more food with less water and energy,' he explained.

Moisture Irrigation has been used to test crop performance in China which includes tomatoes, cabbages, oranges, wheat, maize and cowpea. Dr. Kanda says that the system is advantageous in the sense that it saves energy as pumps are not required, saves water and has a low operational cost because there are no labour requirements once it has been installed.

Ms. Roselyne Asiko Abwalaba, a pediatric nurse, spoke on Intravenous Fluid Therapy, a research she did in Kakamega County. She highlighted dehydration as a leading cause of mortality in infants and young children. Ms. Abwalaba said these deaths were partly attributed to nurses who have low knowledge on Intravenous Fluid Therapy. She went ahead to state lack of practice by nurses after completion of training as a major challenge in Kenya.

The climax of the presentations during the

Melting Pot Seminar was from the Chief Guest, Mr. Alfred Mangula, a consultant banker who gave a framework on the Balance Approach to Financial Freedom. Mr. Mangula pointed out that financial literacy is one of the biggest problems in Kenya.

"Financial freedom is much more than having money. Being free, financially, means that one can maintain his or her desired lifestyle without a regular paycheck especially after retirement," he stated.

His areas of discussion were on insurance, financial planning, retirement, academic/professional pursuit, savings, investment and tax planning. According to Mr. Mangula, the areas he advised on were important because they are vehicles to use towards financial freedom.

Other members present during the seminar were; the acting Deputy Vice Chancellor Planning, Research and Innovation, Prof. Charles Mutai, Prof. Frank Matanga (SDMHA), Prof. James Oloo (SOM), Prof. Judith Achoka (DPRS), Dr. Dennis Ochieno (DCCM), Masters and PhD students among others.





## MMUST NEED TO EMBRACE STUDENT INNOVATIVENESS TO BRIGHTEN VARSITY

#### By Wilberforce Shiundu

As a student centered university, MMUST needs, to a particular extent, involve her own students in internal maintenance of facilities at the University.

Speaking when he met Engineering students, the University Librarian, Mr. Vincent Chibini, said the move will help students get enough exposure and hands on skills as far as their courses are concerned. It would also enable them measure their capability as they complete their studies and move to the outside world to compete for employment opportunities.

"Involving our students in preservation, maintenance and restoration of our University facilities and equipment will help cut on costs the University incurs through outsourcing outsiders to do what our students can effectively work on. We are training professionals whom we can involve in these tasks as part of their industrial practical experience and reduce the cost as we improve on students' innovativeness. When students are involved, they will own their input and protect it hence reduce the risk of vandalizing their own property during strikes" said Mr. Chibini.

He said that the Library is ready to involve students in fixing the library spoiled power system and apply their creativity to ensure that every comrade is able to access a power socket easily. As suggested by the Electrical and Communication Engineering (ECE) students, the move will introduce the use of power extensions which will be fixed in a manner that they cannot be removed, as a way of preventing them from theft and misplacement.

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Students from the School of Computing and Informatics (SCI) may also come in handy in improving internet accessibility within the University. The Informatics students can be tasked to address all internet related issues and come up with innovative suggestions on how to address the issues. With the permission from various Deans of Schools involved in this move, under the stewardship of the able Eng. Moses Mukangula, the Senior Estates Officer, Mr. Chibini noted that students will have an opportunity to learn more and get practical skills in their courses, rather than depending on attachments alone.

Skill of students from Civil and Structural Engineering (CSE) Department are handy when it comes to water technology. They can assist the University in fixing the water supply and come up with creative innovations the University can use to harvest water.

"When students are given a chance to showcase their skills in this area, I am optimistic that the problems associated to water shortages in some sections within the University will be a thing of the past. These students are sitting on great innovative skills. We need to give them a chance to practice and perfect on what they have." said Mr. Chibini.

The Engineering students, led by their student leader Mr. Hussein Mohamed, said they were excited by the plans of having them involved in fixing such issues, which

they said will help them gain the required skills.

"Many universities, nowadays, use student skills in doing some tasks within the university which, to a large extent, helps the universities save a lot of money and also enabled their students to be more competent, confident and easily secure jobs. I am glad that MMUST has embraced the same which will help us improve our skills" said Mr. Mohamed.

After implementation, the move will see majority of students from the various Departments including the Nursing and Health Sciences, Disaster Management, Environmental Science and many other Departments within the University get a chance to showcase their innovations as a way of academically empowering them to do more. This will directly contribute to the Presidential Big Four Agenda as it steers towards education and innovation.



### AWSE Hopeful Visit to Local Secondary School

The MMUST Chapter of the African Women in Science and Engineering (AWSE), on Wednesday, 13<sup>th</sup> February 2019, paid a visit to a local day school in Vihiga County to give hope and good tidings to both staff and students.

A day school with over eight hundred and fifty students (850) students, Lusengeli Secondary School grapples with a myriad of challenges including but not limited to lack of space to put up more structures, a lean teaching staff which has affected the quality of teaching and lack of learning and teaching resources. Housing three (3) streams in each of the classes carrying about seventy students each, the School has become the beacon of hope for the local community as it registers greater numbers than other schools in the region.

Staff and students were addressed by different University staff on successful modalities of teaching science and engineering courses, spiritual well being, reproductive health, academic excellence among other topics. MMUST

was called upon to conduct such visits to secondary schools in the larger western region as part of community outreach, marketing the University as well as role modeling. The MMUST team, led by Dr. Joyce Kagendo, addressed Mathematics and Physics teachers, from the region, who had gathered for a Workshop.

Led by its Chairperson, Dr. Selline Ooko, AWSE, **MMUST** Chapter donated laptops to the School. The laptops were acquired from Australia successful collaborative effort by Dr. Ooko and Dr. Festus Kelonye, the School Board Chairperson and a Kibabii lecturer at University. Accompanying Dr. Selline Ooko was Prof. Judith Achoka, Dr. Elizabeth Omukunda, Dr. Rose Opiyo, Dr. Joyce Kagendo, Dr. Beatrice Barasa, Dr. Ben Omogo, Dr. James Owuor, Dr. Dennis Omayio, Dr. Bernard Rapando, Mrs. Milca Aswa, Ms. Eunice Rapando, Ms. Judith Dipondo, a section of students and their leaders.

### Melting Pot Seminar (Gallery)















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