



MMUST NEWS

A Weekly Digital Publication of Masinde Muliro University of Science and Technology

Post

Vol. 2 Issue 4: 3rd February-9th February 2019

MMUST on E-Health in Service Delivery for Western Kenya



Inside: **Feature Story on University Departments**

UPCOMING EVENTS



- Career Week 11th March 2019
- National Youth Summit- 18th March 2019



Editorial

Dear MMUST Community,
In this edition, we bring you progressive news on e-health(telemedicine) and its envisaged impact on the society as well as the steps the University is taking in transforming MMUST in to an automated one.

We thank the School of Computing and Informatics and the Directorate of ICT Services for letting us into their premises and allowing our spotlight focus on them.

We look forward to covering University sections in our subsequent editions.

Together, let us tell our stories.

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NEW IDEAS ON E-HEALTH AND GAIT ANALYSIS TO BOOST HEALTH SERVICES DELIVERY IN WESTERN REGION



Sandra Dorcas Awuor

Masinde Muliro University of Science and Technology (MMUST), through the School of Public Health, Biomedical Sciences and Technology (SPHBS&T), hosted Flying Faculties from Germany for a workshop on e-health (Telemedicine) from 4th to 8th February, 2019.

Led by Prof. Thomas Schrader, the workshop focused on the training of ICT specialists, clinical officers and health service providers on improving e-health in the Western region through medical informatics and teaching of MMUST physiotherapy students on the Gait Analysis concept. Gait Analysis is the systematic study of human locomotion using eye and the brain augmented through instrumentation for measurement of body movements, body mechanics and the activity of the muscles. Prof. Harald Loose of Brandenburg University of Applied Sciences, Germany, said that with the changing teaching process, there is need to introduce students to more practical aspects of courses. The physiotherapy students and Mrs. Mary Mwangi, a lecturer in the Department of Health Profession and Education (HPE), took part in experiments to test for cognitive abilities, trail making test for visual responsiveness and mini-BESTest for balance evaluation. In

addition, Prof. Harald Loose demonstrated how sensors can be used to detect gait deviations and a wide range of useful data can be collected for use by physiotherapists.

Prof. Schrader said that embracing telemedicine would improve the quality of health services. Telemedicine, through the use of ICT (Information, Communication Technology), ensures that key stakeholders such as Medical doctors, patients, clinical officers, community health workers, physiotherapists and pharmacists are able to exchange data effectively, hence providing emergency assistance, health coaching, physiotherapy and occupational therapy, care of chronic diseases, help with acute illnesses, health monitoring and primary care. As a solution to the high maternal mortality rate in Cameroon, Prof. Schrader, together with some of his students, developed an inexpensive prototype for pregnancy monitoring- "The Hospital In A Suitcase Format:2015". In 2015, the maternal mortality rate in Cameroon was 596 deaths per 100,000 live births compared to Germany's 6 deaths per 100,000 live births. This prototype has since been further improved to provide emergency health assistance.

Dr. Gladys Mengich, the Acting Dean, School of Public Health, Biomedical Sciences and Technology (SPHBS&T), thanked the Flying Faculties for the workshop, adding that it came at the right time. Dr. Harun Chemjor said that the new ideas would be a big boost to health service delivery. In his closing remarks, Prof. Harald Loose gave a vote of thanks to MMUST for the warm reception. He also expressed his sincere gratitude to the physiotherapy students and lecturers for their active participation in his research on Gait Analysis.

Dr. John Otieno, Deputy Director of Medical Services in Kakamega, representing the County Executive Commission (CEC), Mr. Muhatia Musindi, County Physiotherapist, Office of the County Director, Health Services, Phillis Khaoya Wawire, Deputy County Physiotherapist and Winny Mapesa, ICT Officer, representing the Medical Superintendent, Kakamega Provincial General Hospital, were part of the team of specialists from the County government that took part in the Telemedicine workshop. The specialists were hopeful that digitization of health services will be an advantage especially to patients in remote areas. The team visited Mt. Elgon on Friday, February 8th, 2019 for site-seeing after the intensive 4-day workshop.

This was the second workshop after a similar workshop was held on 3rd to 7th December, 2018, and which focused on concept writing for e-health in Western Kenya Region with an aim of analyzing the current situation and collecting aims and visions for improving the use of e-health in Western Region.



A section of workshop session held at Masinde Muliro University of Science and Technology



Feature Story: University Departments

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SCHOOL OF COMPUTING AND INFORMATICS

STANDING TALL AMONG PEERS

In this issue, we focus on the School of Computing and Informatics (SCI). The School was borne from the Department of Computer Science after approval by various decision making bodies of the University including the Deans Committee in January, 2016, University Senate in January 2016, University Management Board in June 2016 and finally by the University Council in August 2016.

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Dr. Kelvin Omieno,
Dean SCI



Under the leadership of Dr. Kelvin Omieno, who was the Chairman of the Department of Computer Science and subsequently the founding Dean, the School has recorded marked progress over the two years of its existence. The School has a Master Plan, 2016/2020 anchored from main University Strategic Plan, of hosting four (4) Departments and one Income Generating Unit. Currently, there are two Departments namely: Department of Computer Science and Department of Information Technology under the leadership of Madam Dorothy Rambim and Dr. Daniel Otanga respectively.

The School has strategized itself to spearhead focused teaching, research, training, development and community service in the fields of computer science, information technology, information systems and computer security. The establishment of the School is in line with Vision 2030 and the University's 2015/16-2019/20 Strategic Plan. This is with the view of potentially increasing ICT's contribution to the Gross Domestic Product (GDP) through enhanced innovative products, research, innovation consultancy, increased productivity and utilization of available technologies sustainably.

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School of Computing & Informatics

Student Population

The School student population has grown tremendously over the last two year since inception from student base of roughly four hundred and fifty (450) to the current student population of more than double after deliberate effort to create more degree programmes as shown in the figure below:

S	Programme	Number of Students			
1	Certificate in Information Technology	27			
2	Diploma in Information Technology	34			
	TOTAL	61			
		YR 1	YR 2	YR 3	YR 4
3	BSc in Information Technology	62	67	63	55
4	BSc in Computer Science	68	56	59	54
5	BSc in Information Systems and Knowledge Management	40	32	27	**
6	Bachelor of Technology Education (Computer Studies)	32	35	33	**
	TOTAL	683			
7	MSc in Information Technology	9	7	15	**
8	PhD in Information Technology	16	8	5	**
	TOTAL	60			
	GRAND TOTAL	804			

Under leadership of the Dean, the School has also developed two new Technical and Vocational Education and Training (TVET) Diploma programmes so far approved by Technical and Vocational Education and Training Authority (TVETA) and enlisted on the Kenya Universities and Colleges Central Placement Service (KUCCPS) website namely: Diploma in Technology in Computer Systems and Diploma in Software Development.

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School of Computing & Informatics

Teaching Faculty and Facilities

The leadership of the School has worked around the clock to equip 4-state-of-the-art Laboratories with functional computers for teaching, research and innovation activities. The four undergraduate Labs LBB 011, LBB 016 and SPD 004 and Postgraduate Lab LBB 015 can support at least two hundred and fifty (250) students at the same time undertaking practicals simultaneously. This is a breakthrough from a situation where there was no laboratory with branded, quality working machines.

Staffing

On the aspect of staffing, the School has had an increase in the number of staff with PhDs to five making it a highly competitive School compared to similar schools from other universities in the region such as Maseno, Kibabii, Moi, and University of Eldoret amongst others hence becoming a preferred destination for postgraduate students.

“The Department of Computer Science had 1-2 staff with PhD due to staff turnover. However, recently the School has five (5) staff with PhD to champion programme leadership, supervision and quality teaching. The number is reasonably high compared to other universities in the region which hardly have the staff with PhD in the area due to scarcity,” says the Acting Dean.

Collaborations and Linkages

The Dean has also initiated several collaborations with industry and other institutions including: University of Nairobi, School of Computing and Informatics through HealthIT project funded by USAID, Zalego, a private firm operating in Nairobi, Oracle Academy, Google Software Development Group and AFRALTI aimed at setting up a CISCO Academy for professional certification on networking. Besides these, the School has also championed ICT innovation which helped improve the image of the University after being aired on national televisions. These innovations were championed through Software Development Research Group initiated by Dr. Omieno.

The School leadership spearheaded development of grant proposals for multidisciplinary research and infrastructure. From the National Research Fund (NRF), the researchers from both SCI and collaborators got 10.8M grant in 2016 Call. Recently, two members of staff, Madam Rambim, Dr. Omieno and Dr. Fred Mzee managed to successfully defend grant proposal on Blockchain in South Africa making it to the finalist list. The verdict on funding will be communicated by 14th February 2019.

Focus on University Departments is a series of articles mainly dedicated to giving Departments at the University a platform and a voice to tell of their story and what they are doing to impact the society. We invite Departments to send to us their articles, accompanied with photos, in order to be featured in subsequent issues. Alternatively, the Editorial Team is available to visit your Departments for a comprehensive and guided take on your operations. Feel free to contact us via pr@mmust.ac.ke.

Bungoma Campus Receives Book Donation



The Coordinator, Bungoma Campus, Dr. Moses Poipoi receiving fourteen (14) textbooks relevant in psychology, health sciences and social work from Ms. Catherine Wanyonyi (Training Officer, Nzoia Sugar Company Ltd). The sugar company has been one of the major stakeholders in Bungoma Campus having enrolled over 30 students in Bachelor of Commerce, Masters in Human Resource and Master of Business Administration. Some of the text book titles include: Neoplastic disorders; Medical Surgical Nursing; Living better and longer with health problems. This donation comes after the one of seven hundred (700) textbooks received from Ms. Jesca Shibutse three years ago

Medical Laboratory Auditors Training



Seated (L to R): Josephine Rioki facilitator- UoN, James Wakungwi Sakwa lead facilitator-MMUST, Abdulatiff Ali, Director of Medical Services & SLIPTA focal person, MoH, Nelly Mukiri, NPHLS-participant.

Venue: Milele Resort, Nakuru County.

Activity: Kenya in Country III Auditors Training for Stepwise Laboratory Improvement Projects Towards Accreditation (SLIPTA) by African Society for Laboratory Medicine (ASLM) sponsored by the Diagnostic Unit of MoH-Kenya.

Role: James Wakungwi Sakwa, SMLT from DMLS, MMUST was lead facilitator listed by ASLM.





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