



# MMUST NEWS

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## *Post*

## The Status of E-learning at MMUST - Prof. Sakwa Speaks.



**Inside this Issue;**

**FIGHT AGAINST COVID-19: MMUST Sani Herb & Sani Booth Innovations**



## Editor's Pen

Dear MMUST Community,

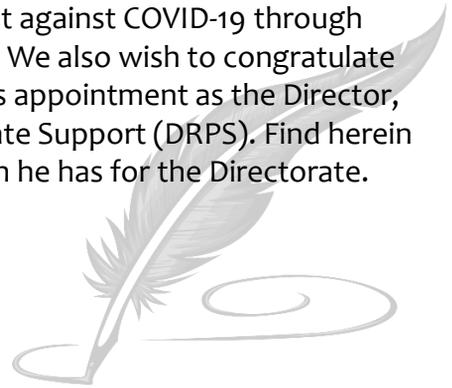
Greetings!

We are glad to bring you this edition of the NewsPost covering a variety of happenings around the University.

With the advent of Coronavirus, the University fraternity has had to adjust and shift focus to the 'new normal'. We thank the University Management for the efforts put in place to ensure everything runs smoothly both academically and administratively.

We are proud of our researchers who are playing a very significant role in the fight against COVID-19 through their various innovations. We also wish to congratulate Prof. Peter Bukhala on his appointment as the Director, Research and Postgraduate Support (DRPS). Find herein his interview on the vision he has for the Directorate.

Enjoy the read!



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## MMUST CHAIRPERSON OF COUNCIL, DR. MUTUA COMMENDS RESEARCHERS ON ONGOING COVID-19 PROJECTS AT THE INSTITUTION.



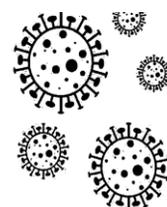
By Awuor Sandra Dorcas  
([sdorcas@mmust.ac.ke](mailto:sdorcas@mmust.ac.ke))

On Friday, 10<sup>th</sup> July 2020, the Masinde Muliro University of Science and Technology (MMUST) Council Chairperson, Dr. Jane Musangi Mutua, visited and inspected the ongoing COVID-19 projects such as the automatic handwashing stations, herbal sauna and production of facemasks at the institution.

Speaking at the Engineering workshop after being taken through current progress with the Sani booth (handwashing station) and Sani herb (herbal Sauna), Dr. Mutua commended the good work done by the researchers adding that the council will support the initiatives. She said that the University is in a good place and researchers should

be encouraged to do even more research.

The Acting Vice Chancellor, Prof. Solomon Shibairo reiterated the Chairperson of Council's remark, saying that his vision for the University is that it is known for quality research. Also accompanied by the Acting DVC(PRI), Prof. Charles Mutai and Acting DVC(ASA), Dr. Bernadette Sabuni, Dr. Mutua toured the Centre for African Medicinal and Nutritional Flora and Fauna where production of facemasks is underway.



Dr. Dennis Ochieno, a lecturer and researcher from the Department of Biological Sciences, said that MMUST as an institution has the capacity for mass production of face masks to cater for students when the University re-opens. He added that, in the near future, MMUST should start production of its own Graduation gowns and corporate wear

Prof. Vincent Omollo, the Director Quality Assurance, explained an ongoing community engagement and research that seeks to curb jigger infestation menace in the region. He also said that herbal regimen that emanates from Madagascar can be used to boost immunity when used as herbal tea. Prof. Omollo expressed his certainty that MMUST is in a good position to register its fourth(4<sup>th</sup>) patent from the Sani booth and Sani herb projects.



**Prof.Vincent Omollo(Left) and Dr.Dennis Ochieno at MMUST Science Park Innovation and Incubation Centre(SPIIC)**



**From left;Ag.VC Prof.Solomon Shibairo,Ag.DVC (PRI) Prof. Charles Mutai and Chairperson of Council,Dr.Jane Mutua give remarks at the MMUST Engineering Workshop.**



## ACADEMIC AFFAIRS REGISTRAR ON STATUS OF E-LEARNING AT MMUST

By Awuor Sandra Dorcas ([sdorcas@mmust.ac.ke](mailto:sdorcas@mmust.ac.ke))  
and Albert Induli ([Induli.albert@gmail.com](mailto:Induli.albert@gmail.com))

As most public universities strive to shift learning to online platforms due to the unprecedented COVID-19 pandemic, Masinde Muliro University of Science and Technology has put in efforts to ensure that more students interact with its Open Distance and E-Learning (ODEL).

The Acting Registrar (Academic Affairs) Prof. Thomas Sakwa acknowledged that it has been a challenging time for the University because the pandemic came at a time when students were about to sit for exams.

“When learning activities were disrupted, we had to venture entirely into online learning. We had to train our lecturers and students on online learning activities before we commenced,” said Prof. Sakwa.

According to him, the MMUST academic fraternity responded swiftly to the call that enabled training of staff. He, however, noted that it will still take time for students and lecturers to get used to the big shift, citing a positive reception to the online platform (ODEL).

“Where we are, about 40% of the MMUST Community is convinced that this is the best option. When we began, we had a lot of challenges but we have been improving and the University Management has been supportive. More than 65% of the students’ population have been reached. The 35% is the disadvantaged group experiencing challenges such as poor network, lack of smartphones and laptops,” he said.

Prof. Sakwa added that the disadvantaged group will be considered as a special group and their studies accelerated when the situation is back to normal.





## MMUST ENGINEERS EXPLOIT THEIR EXPERTISE WITH AUTOMATIC HAND-WASHING STATIONS AND HERBAL SAUNA IN THE FIGHT AGAINST COVID-19

By Albert Induli ([Induli.albert@gmail.com](mailto:Induli.albert@gmail.com)) and Awuor Sandra Dorcas ([sdorcas@mmust.ac.ke](mailto:sdorcas@mmust.ac.ke))

As the Coronavirus pandemic continues to cause tension across the globe, Masinde Muliro University of Science and Technology's School of Engineering and the Built Environment has invented an automatic handwashing station (Sanibooth) and a modified Herbal Sauna (Sani herb) in the efforts to combat Covid -19.

According to Dr. Edwin Kanda, a Civil and Structural Engineer heading the project, the Sanibooth consists of the housing and automatic controls for various components including; automatic water and soap tap dispensers, gadget sterilizers, controlled handwashing time, CCTV mini camera with thermal imaging capability, controlled social distancing and mini- waste water treatment facility.

The Sani herb, on the other hand, is an innovation that uses indigenous knowledge where people with respiratory diseases such as flu and common cold cover themselves in a blanket as they inhale the steam from a boiling herb. The Sani-herb's main three components include; the booth, steam generation and herbs.



Dr. Kanda explains that the steam and the herbs are boiled at specific ratios to achieve the optimum concentration required per session. Working closely with Pure and Applied Chemistry Department, different variety of herbs are obtained from the local community either from a single tree/shrub to be used in the Sani herb. The herbal sauna is suitable for gyms, households, hospitals and with the current situation, in Isolation Centers.

The Project has involved a dedicated team of technical staff and Engineering students including Dr. Peter Cherop- Mechanical and Industrial Engineering, Dr. James Owuor- Electrical and Communication Engineering, Ms Valary Luttah, Mr. Gideon Kitiyo, Evans Nandasaba and five students drawn from the three Departments in School of Engineering and the Built Environment.



*The handwashing station consists of the housing and automatic controls for various components including; automatic water and soap tap dispensers.*

# MMUST TO PRODUCE FIFTY THOUSAND FACE MASKS IN A BID TO MEET GOVERNMENT GUIDELINES.



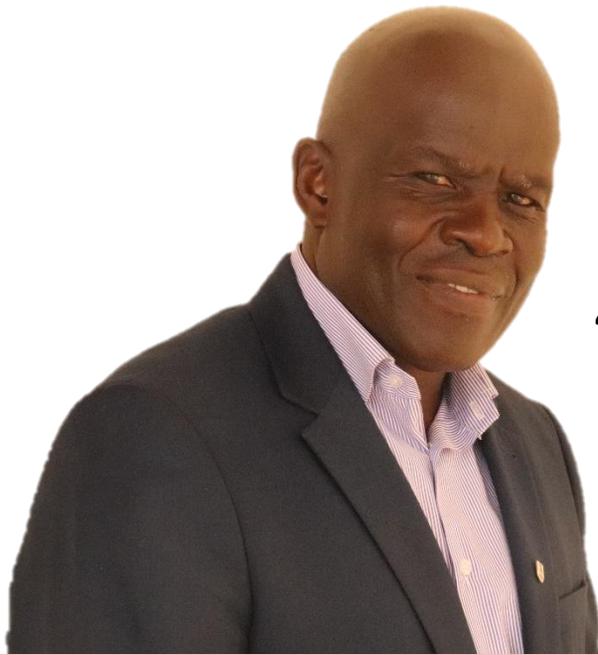
By Albert Induli ([Induli.albert@gmail.com](mailto:Induli.albert@gmail.com))

As higher learning institutions grapple with putting in place the Ministry of Health's COVID - 19 requirements for re-opening, Masinde Muliro University of Science and Technology (MMUST) has embarked on a process of producing over fifty thousand (50,000) face masks and other Personal Protective Equipment (PPE). These will go a long way in ensuring that there is a steady supply when the University re-opens.

Speaking in his Office, Dr. Henry Barasa Wafula from the Physics Department, doubling up as the leader of the medical face mask project, said that the venture started in a bid to support the National government in the war against the Virus. He adds that after carrying out an extensive research, the findings revealed that most face masks available in the market were of very poor-quality and the supply was also very low.

In his view, Dr. Barasa said MMUST-facemasks are an upgrade of surgical masks in its three-layer component. The polyester material, cotton sandwiched with a polypropylene filter makes them very effective. The project, which has passed its prototype stage and well received in the community, was objectively initiated to safeguard MMUST fraternity against COVID-19 menace. The Physics Lecturer points out the importance of the project in providing direct employment opportunity to around twenty (20) youth who will support in the production. He also hinted on the plan to partner with MMUST Technical and Vocational Education(TVET) Directorate to launch short courses in Tailoring and Textile.

Although they are wary of shortage of supply in raw material, the project leader says that by the time students re-open, the team will have reached its target.



### **'WE WILL SUPPORT RESEARCHERS REACH THEIR VARIOUS DESTINATIONS' SAYS INCOMING RESEARCH DIRECTOR .**

Prof. Peter Wisiuba Bukhala is an Associate Professor in the Department of Health Promotion and Sports Science, MMUST. He has immense experience in the field of sports. His expertise is in programme planning for inclusive physical activities. He is the former C.O.D, Health Promotion and Sports Science. He has also previously been the University acting Registrar (Administration) from 2014-2016. Recently, he was appointed as the Director, Research and Postgraduate Support (DRPS). We interview him to get an insight on his personal and academic life.

By **Wambugu Mary Wangari**  
([mwangari@mmust.ac.ke](mailto:mwangari@mmust.ac.ke))

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#### **Please tell us about yourself and your family**

I was born in a village called Malinya, Ikolomani constituency, sixty-three (63) years ago to my parents who are now deceased: they were very resourceful in

what I became later. My mother used to be a primary school teacher but by the time I was born she had stopped. She always had the teacher mentality of discipline. My dad was a pharmacist who was always posted all over the country. I got married in 1984. Between us, we have two children, a boy and a girl. I am a grandfather of two.

#### **Tell us about your academic journey?**

I went to Musingu Primary School which is just on Sigalagala road. In 1973, I joined Kakamega High School. During our time then, going to this School was like going to Alliance; it was a School every young boy wanted to go to. In fourth year, I passed very well, I got First Division which was like scoring an 'A' now.

## New Appointment

From there, I went to Cardinal Otunga High School in Kisii for my Form Five (5) and Six (6). Later, I went to the University of Nairobi but we were stationed in Kenyatta University, then a University College. I studied Education for my Undergraduate: Sports was my major subject and Kiswahili was my minor.

I did Physical Education (P.E) with the main reason that I wanted to join the military. I had a cousin who was a Major in the army and I really admired him. I loved how nice the military looked in their uniform and how they carried themselves in general. My cousin promised me that once I finished the University, he would help me join the army, specifically to be in the education corps. This never happened because in 1982, just when I was finishing University, there was the coup and I did not like what I saw.

After my Degree, I was posted to Loitokitok Secondary School in Kajiado as a teacher. At the same time, I had been assigned to work with Outward Bound Mountain School, an institute that trained military personnel, police and civilians on outdoor excursions.

Three years later, I went back to Nairobi as a P.E Tutor at the Kenya Science Teachers College where I worked for one year and then got a job at Egerton University to teach Health Promotion and Sports. I taught at the University for ten years. While there, I got a scholarship to study for my Masters at McGill University, Canada. I completed in 1990.

Thereafter, I got a job with Kenyatta University from 1996 to 2012.

**We are aware that you have held quite a number of administrative positions in MMUST. Please tell us about them including how you joined the University.**

I joined MMUST in January 2013 as a Senior Lecturer.

In 2014, I was appointed Acting Registrar (Administration), a position I held until 2015. I felt that the time had come where I could not continue. Moreover, the people in Human Resources were thinking about changing the post to be managed by a HR person. At the same time, I wanted to be a Professor, hence, I chose to go back to class, do my research and publish so that I could qualify for the stringent Commission for University Education (CUE) promotion guidelines.

I went back to my Department to teach and, after one year, the Vice Chancellor then appointed me as the Chairperson of Department. I have been serving in that position ever since. I was about to complete my term as Chairperson this year when the new acting VC appointed me to be the Director, Research and Postgraduate Support for the next three years.

**You have attracted significant research grants to MMUST. Tell us about some of them.**

My research grants come in different forms. One, I have done proposals that have supported students in my Department for capacity building. For example, one PhD student, through my links, was able to travel to France for three months for literature review. When he was there, he met with some of my colleagues who helped him shape up his proposal. Essentially, I connect my learners to supervisors outside of the country.

Secondly, I have been able to develop a proposal for training members of staff in my division using international support on research methods, and as a result, I organized and led a team of about five of them to Ethiopia to present their papers and at the same time attend a global conference, fully paid, courtesy of my networks.

Thirdly, I did a proposal to the American College of Sports Medicine (ACSM) to train and capacity build people, from East and South Africa, on issues of how to assess and manage sports injuries. I won and MMUST was able to host a 5-day international workshop fully sponsored by ACSM. This was the first workshop of its kind to be held outside of America.

We did another proposal to an investor from USA to partner with the University to build a gym and through our negotiations, we got him to agree to fund it. The total cost of putting up the gym, plus all of its equipment, has actually been cited to be over Kshs. 30 million. Now, we are working with him to construct a second one purposely meant for the students.

We did a research with people from Australia and five members of my Department were trained, for free, on strength testing. Subsequently, we were given a machine worth Kshs. 1 million which is here in our Department.

Finally, I cannot mention how much I have done to support students in their projects. I have worked with them and helped them polish their proposals to attract funding. We have had our students getting NRF and University funding; almost Kshs. 3 to 4 million.

### **What is your advice to staff and students on winning research funding?**

I have noted that people win research money when they are persistent: consistently pursuing their goal. Unfortunately, some people focus on one thing and when it does not work out, they leave it and go to another idea. If you come up with a proposal that is successful, and it is not funded by NRF, push it up. Look for other funding agencies and send your proposal there. Look at how you can



change it into fitting what they need. Your idea could just be that it was not among what they call the 'hot issue' that the agency was working on. However, if you send it elsewhere, it may be a hot idea. In short, do not give up. They say you write a hundred proposals and only one gets funded. It might be the one that changes you.

I would also like to advise my colleagues to engage in research collaborations not only in Kenya but also across the globe. Use workshops, conferences, LinkedIn and other platforms to make connections with scholars.

### **You were recently promoted to the rank of Associate Professor in the Department of Health Promotion and Sports Science. What is your area of specialization and why did you choose this field?**

My area of specialization is Disability Sports. You see, in the field of Sports Science, there are various specialization areas.

There are the Science-based ones where you do physiology, anatomy and so on, there is the education part like curriculum, and then there is Psychology where my interest was: disability studies fall under this. So, I am more of a sports psychologist but with a focus on disability.

My passion for disability studies began when I was an undergraduate. My roommate had a friend who was blind and every other day, he used to go and read for this student. You know there was no braille then or the reader technology we have now. What used to happen was, the student would come with a book, read a whole chapter for him, and he internalizes what you have read.

Sometimes, my roommate would be engaged, so he would send me to go and read for this particular student. Overtime, we developed a friendship. I even asked to have my own student to read for. When we were finishing Third year, I was a converted volunteer.

My passion grew further because I was always volunteering for Kenya Paralympics. As a result, I got a chance to be trained as a volunteer supporting people with disabilities, in Washington DC, specifically those with intellectual disabilities. I have been in the field for over twenty years as a volunteer. I even did my fellowship at the Special Olympics International in Washington for six months and trained in terms of implementation and programme planning for people with disabilities.

I have represented Africa on the Special Olympics Board in terms of developing the Strategic Plan that they had from 2010 to 2015. During that same time, I was also appointed to serve on the International Paralympic Committee.

**In your area of specialization, what have been some of your achievements?**

I established a sports programme at Kenyatta University called Camp Shriver which has been running from 2009 to date. This is a project that enables people

without disabilities to support those with disabilities so that the later can become more included in sports. Camp Shriver has been recognized as an innovative programme and has been showcased in many countries in Africa.

At MMUST, I have worked in terms of developing capacity. As I speak now, I have eight students that I have supervised at Masters and PhD levels in the area of Sports Science. Out of these eight, six of them have actually graduated in the area of disability. So, anybody in this country who has a Masters or PhD in disability studies is my student. Additionally, we have another lot of four students who are coming out, both in MMUST and Kenyatta University.

Last year, I did a proposal to the Special Olympics International to come and train Optometry students to learn how to assess young people with intellectual disabilities in the community. We trained over one hundred and twenty (120) students.



***Prof. Bukhala presents certificate from Special Olympics International to MMUST's former Ag.VC, Prof. Asenath Sigot.***

Locally, I serve on the Kakamega County Sports Organization. I am also the Chairman of the youth empowerment in Kakamega County sports. We are basically using sports as a platform to empower youth in the community.

We provide funding to youth groups with regards to how they can improve their sports skills and talents.

**Your current research interest is in the development of programmes targeting community awareness and response to the COVID-19 pandemic. What have you done so far?**

MMUST, through the University Management, awarded Kshs. 500,000 to my proposal on organizing COVID-19 awareness messaging.

We assessed the knowledge-base of staff and students, as well as their attitudes and practices towards this pandemic. Thereafter, we developed radio programmes, running on 103.9 MMUST FM every Thursday, whereby we bring in different University experts to talk about key pertinent issues which we urge staff and students, those within the range, to listen in. Those who are not within, we make videos of the same and upload them on Youtube.

That is my project this year and we now want to move it to the community where we can involve local radio stations.

**Congratulations on your appointment as Director, Research and Postgraduate Support. What is your vision for this Office?**

First and foremost, I would like to thank the Acting Vice Chancellor for appointing me to serve in this position. I also take this opportunity to express gratitude to my predecessor because she has done such a good job in laying a firm foundation for this Directorate. Mine is just to build on what she has done and maintain the tempo that she has set.

This Office requires patience, wisdom and teamwork: all principles that I have acquired from my training in Sports.



*Prof..Bukhala poses for a photo at Kaberua forest in Mt.Elgon during tree planting exercise.*

## New Appointment

I plan to use these skills in making this division stronger.

I am thinking of making this Office open to researchers so that they can come, collect information, ask questions, and by so doing, we can support them in reaching their various destinations. I also want to develop multidisciplinary teams so that we can do research that is not just enclaved in one department. I believe that we have experts here in MMUST, who, if brought together, can do great things.

I am looking at doing research that is institutional-based: doing research that supports MMUST, for example in infrastructural development.

**Finally, describe yourself in three words**

Simple, humble, firm



*Prof. Bukhala participates in tree planting exercise at Kaberua forest in Mt. Elgon*



'We say Thank You' to Prof. J.S.K Achoka for diligently serving in the Directorate. We wish you well in other capacities of service bestowed to you.

*Prof. J.S.K Achoka, immediate former Director, DRPS*

# MMUST-Western Chapter African Women in Science and Engineering(AWSE)meet to chart research agenda for the year 2020/2021





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*Post*

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