

Busitema University innovates e-learning technology

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Dr. Samson Rwahwire a senior lecturer of Mechanical and Materials Engineering at Busitema University has come up with a new tool known as the light board which is an important resource for e-learning.



Dr. Samson Rwahwire demonstrating how to use a light board technology. Photo/ Courtesy

With increasing numbers of student admission coupled with a growing number of working class in need of upgrading, lifelong learning and online classes are the solution.

Dr. Samson Rwahwire a senior lecturer of Mechanical and Materials Engineering at Busitema University has come up with a new tool known as the light board which is an important resource for e-learning.

“Over time, I wanted something I can use, especially for learners,

whereby I can face them and at the same time I can be able to solve equations for the courses such as engineering mechanics,” Rwahwire said in a sample video that has gone viral on social media.

Blackboards and whiteboards are not ideal for e-learning because recording a video while solving equations, one has got to turn their back to the learners, which leads the lecturer to be disconnected from the learners.



Innovator: Dr. Samson Rwahwire

The light board is a new innovation in the country and the first of its kind in Uganda’s university system.

It will be easier for lecturers to record lectures for online learners for flipped classrooms such that the learners are able to watch the recorded lectures any time and at any location.

The new technology enables the lecturer to have an eye contact with the learners which enhances learning.

With some funding from the Faculty of Engineering, Rwahwire tried a couple of materials in his backyard and made the first prototype that was promising.

The light board uses the principle of total internal reflection, but the right kind of glass with the best effects couldn't be got in the country.

“I moved in Kampala and asked a couple of glass suppliers for glass with low iron content but could not get it, so I improvised and got something close to the ideal glass, and with trial and error, I was able to come up with a functional light board,” Rwahwire explained.

Light board will obviously revolutionize e-learning classes, and Busitema University being the first University to lead in this innovation is a plus since the university celebrated 10 years in October 2017.

The innovation shows that if government funds research, a lot of innovations will come out of the country's engineering schools.

Rwahwire is active in research at Busitema University and has several other material engineering innovations that can be seen on

his Google Scholar profile which shows that his research interests are in the sphere of acoustics, polymers, aerospace, composites and nanocomposites.