

For Rwashana, ICT is the answer

Education

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Rwashana is determined to solve society's problems using ICT

Her life is marked by many firsts. She was among the first group to study for a master's degree in Computer Science at Makerere in 2002 and the first student to attain a PhD in Computer Science from Makerere in 2009.

She is Dr Agnes Rwashana Semwanga, a lecturer in Information Systems at the School of Computing and Informatics Technology in Makerere University. Dr Rwashana has since 2009 developed simulation models for immunisation, maternal health and school dropouts, among others, together with her students.

These models are designed to help researchers, both medical and academic and policymakers to understand problematic behaviour in society, and find solutions for them.

"System dynamics models utilize tools which provide information giving a greater understanding of the problems being investigated, thereby enhancing managers' abilities to make informed decisions," Rwashana says.

Some of the applications of system dynamics modelling in healthcare include immunization coverage, epidemics, disease management, supply and demand of human resources for health, health planning and chronic illnesses.

She believes that a broad integrated view of the systems provides an analysis of the complex interactions between behavioural, technical, policy and cultural issues which fosters communication among the stakeholders, designers and programmers of information systems thus facilitating the capture of requisite information.

This charming mother of four says she has always loved working with computers from secondary school and worked hard to get her way into this area, despite initially graduating as a teacher. The daughter of Selina, a retired principal nursing officer and lab technologist Fred Rwashana of Rwashamaire in Ntungamo, Agnes Rwashana had to fight for the meagre resources in her family with six other siblings. But to their credit, the Rwashanas made sure all their children went to good schools.

Today, all Rwashana's siblings are scientists except one. There is a psychiatrist, an agriculturalist, a nurse, a systems administrator and a mechanical engineer. Two have PhDs. Dr Rwashana started her education at Gayaza Junior School where she served as house leader and later joined Gayaza High School for O and A-level before enrolling for a bachelor's degree in Education (Chemistry and Mathematics).

"I wanted Computer Science but it was not available at Makerere at the time; so, I grudgingly went for Education after I had failed to secure a scholarship at a Canadian university. My family was not so rich to support my education abroad so I settled for this course, which to me, is very difficult," she says.

Despite her misgivings, she passed the course and then enrolled for a master's degree in her dream course after it had been introduced at Makerere in 2002.

"When I got the chance, I was excited because I had always wanted to know how computers work," she says.

By then, she was the mother of a six-month-old baby, after marrying Henry Semwanga, who works with PACE, an NGO charged with stopping cross-generational sex among students.

"In all my pursuits, my husband has been my mentor because he is always there to guide and encourage me; so, with his support, I was ready to proceed," she says.

Later, she enrolled in a PhD programme specialising in simulation models. Her research looked at the challenges of carrying out immunization in developing countries. She is currently conducting research on the benefits of using mobile phones in improving maternal health in the rural areas.

“Computers make it easy for us to understand problems so we can solve them,” she says.

Rwashana is a stickler for high quality work and Vincent Ssozi, who studied for his master’s degree in Computer Science under her supervision attests to the fact:

“The way she goes about her work is amazing. She is kind yet tough and makes it so clear that you feel bad about annoying her with substandard work.

“She was very quick in responding to my research which is why I completed it on time,” he says.

Peter Wakholi, a lecture of Information Systems at the School of Computing and Informatics Technology where Rwashana works describes her as a Christian lady whose family takes first priority. Wakholi adds that she is a diligent lecturer and good timekeeper in all she does.

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