



The Kenyan scientist who is opening doors for women in STEM

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by Julia Chanda Zvobgo in Tales on December 18, 2017

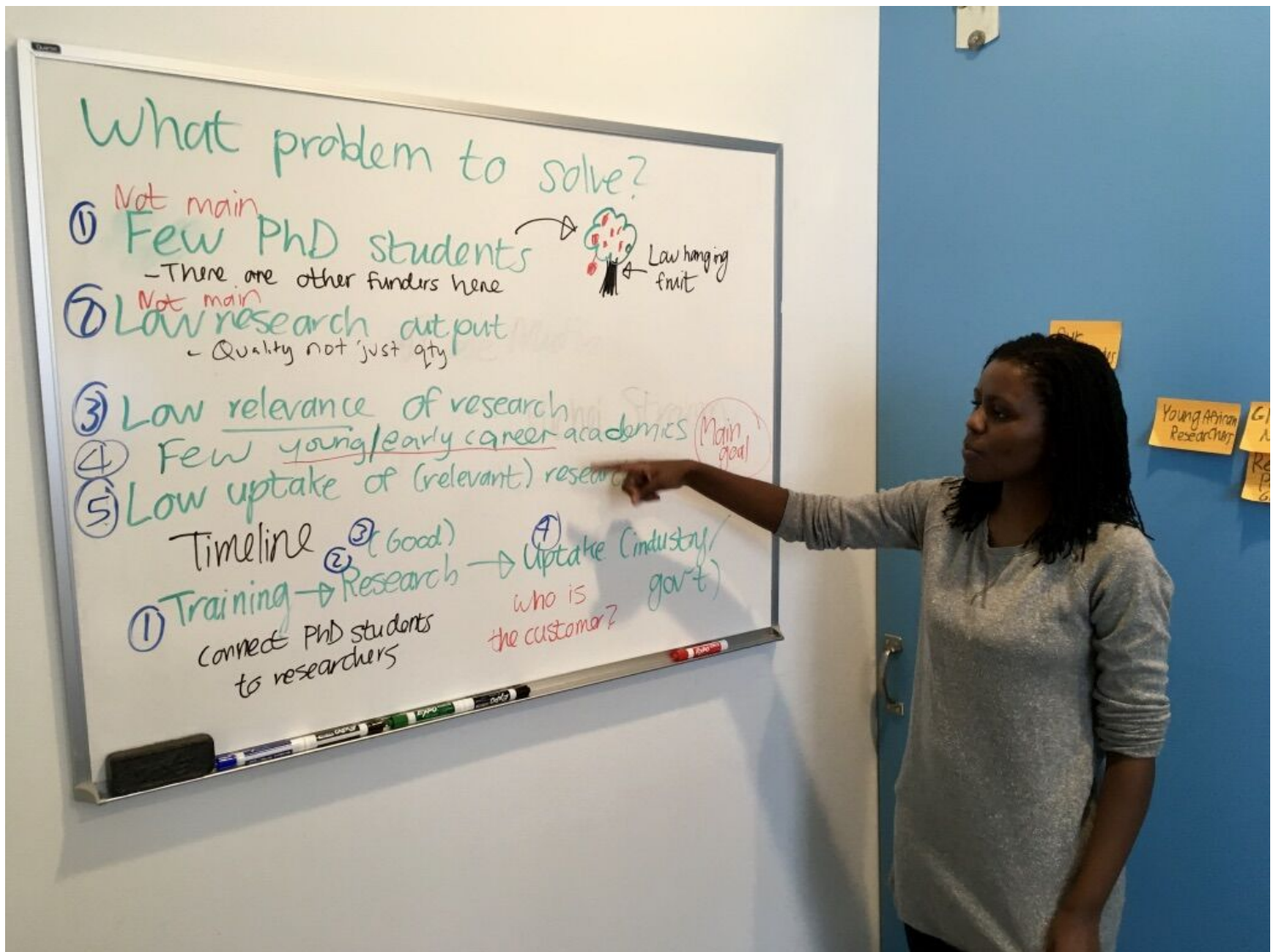
Dr. Rose Mutiso is proud to be a scientist. She is the co-founder and CEO of the [Mawazo Institute](#), a nonprofit research institute based in Nairobi, Kenya that supports the next generation of female thought leaders and scholars in Africa. As an independent researcher, she has moved her career into a more interdisciplinary approach exploring how science and technology feed into development on the continent of Africa. She is the newly appointed Next Einstein Forum's (NEC) Ambassador for Kenya.

Worldwide the lack of women in STEM (Science, Technology, Engineering, and Mathematics) is an issue, how do African countries compare?

Backing up a little bit, in Africa even if you remove the gender lens, the state of STEM is very weak compared to the rest of the world. Some of the statistics: Africa produces less than 1% of research output in the whole world even though we are about 15% of the global population. We have the lowest levels of Research and Development (R&D) investment. If you look at women in science and R&D, I think the global average is about 30%. In Africa there is this double whammy: where the state of research in STEM is quite low and layer on top of that all the [economic and socio-political] challenges that we have... it's a very weak environment for both women and men but even more so for women.

That being said I don't want for people to think it's all doom and gloom, we have made a lot of improvements. In Africa, some studies show that we have been doubling research output annually for the past decade or so. So people are doing more research and that's a good indicator of general productivity in different knowledge sectors. Our strongest point is in the Health Sciences, where we have a lot of native research, which is good because a lot of our challenges fall in that area.

In regards to the state of women in STEM, we need more data so we can figure out where the gaps are. Is it in high school where girls maybe get messages that science is boring or cool for boys? Or is it after that, in university, in family constraints or in the job market where there is a lot of discrimination against women? I think there are challenges across the whole pipeline but broad data would help us to understand where.



Mawazo Brainstorming Session

What are the consequences of a lack of funding for African research in STEM?

Everything we are trying to achieve in Africa in terms of our Sustainable Development Goals (SDGs) has some kind of STEM relevance. For example economic development; enabling a transition to a value added economy or increasing industrialization... you need a STEM workforce. If you look at a different indicator like Healthcare, STEM or Science is really critical in every sense. Whether it's about being able to have more control over locally developed and manufactured medicines and procedures and being able to have in-house medical sector interventions. I work in Energy and power; you can't run industries or have kids study at night without electricity. Across the board, every challenge in Africa has strong STEM relevance so if we do not invest in STEM how are we going to meet these goals?

There is so much you can do with a science background. People have this idea that with sciences you can only be in a lab. There are specific tropes that we have in terms of what we think about people in science but it is such a broad and diverse field and has a lot to offer for the African continent. In Kenya we have so many mobile-based tech

entrepreneurs making apps, and then people doing traditional lab science in places such as our impressive agricultural and medical research institutes, and people like me thinking about how science ties into development.

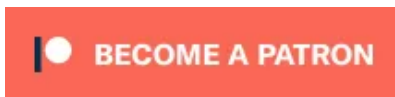
In many parts of Africa, we are also quite reliant on outsourced talent. For example, when multinationals come and set up shop they often bring their own people with them, particularly for the high-skill roles. This is such a missed opportunity for creating employment locally, and also to help seed the next generation of innovators that will create our own homegrown companies.

Now that we live in this globalized world we need to think about global interconnectivity a little bit more fluidly. In the past, knowledge transfers between Africa and the rest of the world have often been unidirectional. The new generation of African thinkers and scholars, like you and me, are people on the move envisioning a future for themselves in which they have much more flexibility in terms of where they are and how they are participating in the global economy. We want to be co-creators and collaborators on equal footing with all our global partners. The question of how to build equal research partnerships is one that is central to Mawazo's work, and there is still much more work to be done to achieve this.

We need to move from merely writing reports and other strategy documents that are languishing in the offices of various development agencies, to really seriously making progress on all of these issues. The stakes are high.

For more information about Mawazo Ph.D. scholarships for women click [here](#).

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JULIA CHANDA ZVOBGO

Julia Chanda Zvobgo is the Founder and Editor-in-Chief of 'Of Africa'. She was born in Zimbabwe and raised in The Netherlands. As an Afropean she is always looking for new and creative ways to "make the invisible, visible". She is a co-founder and a member of 'ethnovision' a collective of visual anthropologists and filmmakers. Julia also volunteers as the Director of Communications & Development for Tariro House of Hope, an NGO that transforms the lives of children and their communities in Zimbabwe.



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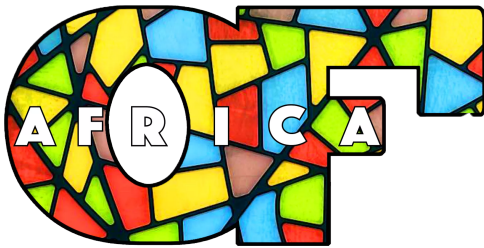
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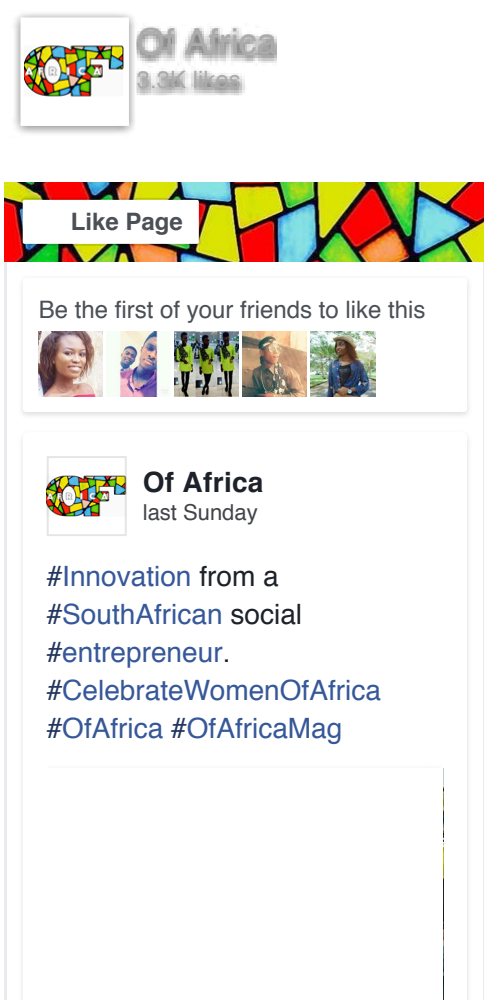
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