

## CAREERS IN SCIENCE

### What's stopping young African scientists from achieving their potential

*Young African scientists face persistent barriers which cause them to leave their own countries, and even academia. This means the continent's workforce loses highly trained people who are crucial for scientific and technological advancement, and for economic development. So write Anna Coussens, Abidemi James Akindele, Badre Abdeslam, Fridah Kanana and Mona Khoury-Kassabri on The Conversation.*



It is estimated that 20 000 highly educated professionals leave the continent annually – with up to 30% of Africa's scientists among them.

A number of factors contribute to this trend. The extreme factors include war and political instability. But the more common 'pushes' are a desire for higher pay, better opportunities, and the search for a conducive research environment – one where infrastructure and management help drive careers and research potential.

To identify all the barriers and develop strategies to address them, the Global Young Academy – an organisation of 200 talented young scientists and 200 alumni from 83 countries – established the Global State of Young Scientists Africa (GloSYS) project. Working with local research partners and international

higher education experts, the project aims to identify the challenges and motivations that shape young scientists' career trajectories.

Initial findings point to a lack of mentoring, resources and funding as key issues young scientists face across the continent. Using this data, the academy will be able to identify critical areas in which young scientists need support and develop innovative strategies to alleviate these challenges.

The project comes at an important time as, over the past few years, African countries have initiated programmes to increase the number of PhD graduates. But if governments don't simultaneously develop support structures for graduates, and increase access to critical teaching and research infrastructure, these young scientists are set up to fail.



NextEinsteinForum/flickr

Global Young Academy members ran a GloSYS workshop at the Next Einstein Forum Global Gathering in Kigali.

**The study**

The Global State of Young Scientists Africa project uses an online survey and in-depth interviews to gather as much detail as possible. It looks at young scientists’ motivations, career ambitions and the barriers they experience in fulfilling their career aspirations.

It targets researchers and scholars who have earned a Masters or PhD within the last ten years, irrespective of their current employment status and sector. It is also open to current PhD students in Africa and African scientists and scholars currently living in the diaspora.

Having this wide range of participants means the data will reflect a broad range of experiences. From early-career researchers with a history of moving within and out of Africa, to those who have never left their home countries. From departmental heads, to researchers who have trouble finding work despite their high qualifications. The team is also particularly interested in hearing from early career researchers outside of academia, as this helps them understand their reasons for not pursuing a career in research.

From the preliminary survey results – drawn from more than 700 young scientists’ responses – it has been found that, even with diverse backgrounds, early-career researchers have a great deal in common. A lack of mentoring, infrastructure, resources (staff and material) and funding for research and resources are key reasons for not pursuing a career in academia. There is also a strong desire for more training in grant writing and professional skills.

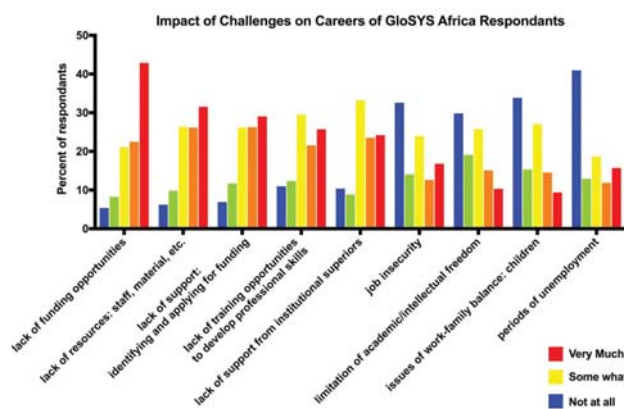
Using this information, the GYA plans to develop programmes to address the challenges, as the researchers have previously done.

This is the third survey done under the Global State of Young Scientists umbrella. The first was a global study of young scientists from 14 countries across five continents. The second was a regional study which focused on four Southeast Asia countries.

A major challenge identified from those two studies was the desire for training in leadership skills. As these young scientists

began to grow their own research groups they needed the tools to deal with the challenges of integrating research, teaching, and fundraising. In response, Global Young Academy members developed and implemented science leadership programmes in Africa and Asia, in collaboration with creative facilitators KnownInnovation and Future Africa.

Obtaining these new skills created an incentive for the young scientists to pursue their career in academia. The fellows found, for instance, the science leadership programmes to be one of the most significant workshops of their careers.



Career challenges young scientists from Africa are experiencing

**From barriers to action**

The African leg of the survey continues. Once common challenges have been identified, the team will then work with policymakers in Africa as well as with international funding bodies to develop evidence-based initiatives to address them.

It is hoped that the Global State of Young Scientists Africa project will highlight further areas of need, so that the Academy can develop new innovative programmes in collaboration with science and education policymakers to improve young African scientists’ prospects.

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