

Investments to Foster Research in Kenya



UASP Success Stories: John Ayisi



As Deputy Director of Research in Kenya's Ministry of Education, Science and Technology, John Ayisi shapes national education policy around research, science, technology and innovation. The Kenyan government, in line with its "Vision 2030," views growth in research and innovation as critical to becoming an industrialized, middle-income country. Universities are naturally a part of this strategy and are undergoing reforms whereby they now place more emphasis on research. Yet John understands how difficult it can be to shift a university culture that has for so long prioritized teaching.

"It's very hard to turn faculty who have basically been teaching throughout [their entire careers] to become researchers."

Although the government allocates funding for research through the National Research Fund (NRF), John says the quality of proposals they received in the past was so poor that they would often spend only 50% of the allotted budget. He found poor linkages between Kenyan universities and industry, which prevented translating technology from university research into a commercial market. And he was concerned that if "faculty themselves are not very good researchers...they may not mentor well their students."

"Nearly all those universities have strategies on how to promote research among their faculty, and it involved actually investment, in one way or the other."

John felt he needed some exposure on how countries with a mature research ecosystem support research at their institutions. He was awarded a competitive Research Management Fellowship under IREX's University Administration Support Program (UASP) and visited the United States for six weeks in 2016. With his cohort of fellows, John engaged in training on research management topics like grant writing, technology transfer, and incentivizing research. IREX then placed him with the Tennessee Higher Education Commission who organized four weeks of visits to diverse institutions around the state, as well as meetings with staff from major US funders including the National Institutes of Health (NIH) and the National Science Foundation (NSF).

The site visits were a valuable opportunity to observe and compare research management practices. John noted his U.S. host institutions employed a multi-faceted approach for promoting research, including budgeting a university fund for research, identifying disciplinary "niches" that distinguish the institution from competitors, engaging undergraduates in research, hosting intensive workshops on how to write proposals or manuscripts for publication, and providing internal feedback to faculty on unsuccessful proposals. John also observed "[U.S. institutions] exposed their faculty to funding agencies like the NIH and the NSF so there was capacity building on exactly what the funders look for, and how good quality proposals look..." These insights significantly influenced his work on return home.



John Ayisi presents during a proposal writing training for early career faculty

Since the fellowship, one of John's key messages for institutions is to invest in their researchers' skill development.

He often focuses his efforts on younger faculty who are still formative in their careers. In 2017, John won a UASP small grant to organize an intensive proposal writing training for 30 early career faculty from across Kenya. He modeled the content from topics covered in the UASP workshops and sourced a panel of experts to co-facilitate, including an NRF representative to provide a funder perspective. Among the program participants, 20 submitted proposals to the NRF and reviews indicate that the quality has improved substantially. In 2018, the NRF engaged John to offer postgraduate and faculty workshops for several universities in advance of launching their next call for applications. To date, John estimates he has consulted on proposal writing and other capacity building areas at 25 institutions in most regions of Kenya.

“One of the things I pass around is that [in order] for researchers, for faculty, to engage in practical research, their capacity has to be built... including the [proposal] review process, and what funders actually look for when they put [out] calls for research.”

John has also applied enhanced proposal writing skills in his own work. He recently wrote a winning proposal for a Transformative Innovation Policy grant, awarded by the Canadian government's International Development Research Center. The grant funds innovations which address UN Sustainable Development Goals (SDGs). John's project, in collaboration with the University of Sussex (UK), looks at the innovation of mobile schools as a means to provide students in nomadic areas with ongoing access to education (to address SGD #4). According to focus groups of parents and students from the targeted communities, John says that keeping the children in school has protected girls from child marriages (common among nomadic society) and empowered boys to be peacemakers and “to value human life” in an environment often afflicted by conflict over resources.

“The [UASP] program was extremely beneficial and it has maintained a signature in my work. It has made an impact and will go on for a long time, and I keep building on it.”

Given the positive outcomes so far, John hopes he can procure funding to offer more workshops, to reach more postgraduates and faculty. But his ambitions for the country also extend beyond successful grant writing. He's also acutely aware of the need to nurture future generations of Kenyan researchers. John says this is “another thing I learned at Tennessee that is basically nonexistent here... research

[must be] ingrained in our youth... [who are] feeders to postgraduates and later on to [become] researchers and/or faculty.” As such, he counsels universities to institutionalize the engagement of undergraduates in research and spoke about the topic at the Eastern Africa Research and Innovation Management Association (EARIMA)'s 2018 conference. And John believes they are listening: institutions have started to report out the ways they now incorporate undergraduate research activities in the curriculum, from the proposal stage, to hypothesis generation, to data collection and analysis. John adds that he is still analyzing the data for this to draw conclusive findings, but he is pleased at the direction the country is moving in.



Group discussion at a grant writing workshop