

NASEM Workshop on Transforming African Universities

The National Academies of Sciences, Engineering, and Medicine will coordinate a virtual workshop on March 14-16, 2022, convening key partners from African and US organizations, institutions and governments to discuss how best to support African universities, under the aegis of their governments, related NGOs and partnership initiatives (e.g., ARUA, AAS, PASET etc.) to become more effective research universities in the STEM fields broadly defined. A key goal of the workshop will be to launch a medium-large scale Africa-US engagement initiative that grows the capacity of African university STEM programs to impact African economic development, address the challenges of climate change and sustainability, and exploit the opportunities created by the digital revolution.

Much work has been done by African governments, often with support from US-based foundations, to develop their university systems. Those include [PHEA](#) with more recent work through [HERANA](#) and [PASET](#). Increasingly, African universities and their governments recognize the benefits of partnering with researchers at universities in other countries as well as with their regional private sector. Research capacity has begun to blossom through the [African Centers of Excellence \(ACE\) program](#), supported by the World Bank. Programs and initiatives through the [African Academy of Sciences](#), the [African Research Universities Alliance](#), the [Coalition for African Research and Innovation](#), the [Alliance for Accelerating Excellence in Science in Africa](#) and the [Consortium for Advanced Research Training in Africa](#) are likewise expanding capacity in research and development in a number of STEM- and health-related fields. The Regional Scholarship and Innovation Fund, set up by PASET is the first pan-African pooled science fund supported by African governments and donors, which aims to have an endowment to enable sustainable financing of doctoral and post-doctoral research as well as innovation, focusing on specific thematic areas of importance to the continent's development. Increasing the participation of women has also been a priority for these programs.

Now is the time to capitalize on these Africa-led efforts and contribute to the development of high caliber teaching and research in relevant STEM fields in African universities, based on both intra-regional and international collaboration. Recent capacity building programs have focused individually on scholar exchanges, summer schools, curriculum building and so on, often in targeted areas such as health and agriculture. We believe that a synergistic approach capitalizing on these efforts will have even more impact. We envision a next-generation US-Africa STEM initiative that will build to at least USD \$10M/year over a period of 10 years, and that leverages the interconnected nature of a group of three programmatic areas: institutional transformation in teaching and research administration; joint Africa-US education and research; and network building. This will be achieved through a long-term partnership between a consortium of US universities and a group of African universities, supported by governments, the private sector, and philanthropies.

To provide the groundwork for a new sustainable initiative between the US and African nations, we are convening key leaders for a 3-day virtual workshop, hosted by the National Academies of Science, Engineering and Medicine. The first session will focus on reviewing experiences, achievements and best practices of recent large-scale initiatives to build STEM research and education capacity on the continent. The second will identify the main priorities for joint work and potential innovative modalities for collaboration between US and African universities. The final session will bring together senior public officials, university leaders and private sector champions from both Africa and the US, signaling a strong joint commitment to the initiative. An outline for next steps will be generated, including fundraising for the initiative and a follow up meeting on the continent.

Workshop participants will include lead representatives of all key sectors: African governments (e.g. Botswana, Cameroon, Ghana, Kenya, Morocco, Nigeria, Senegal, Rwanda), African universities (e.g., Makerere University, NM-AIST, Mohammed VI Polytechnic University, University of Ghana), African partner NGOs and partnerships (e.g., PASET, ARUA, ANSTI, AAS, etc.), industry representatives (IBM, OCP), funding agencies (e.g., World Bank, USAID, NSF and other public and private research funders).