

# STEM Research Culture in Africa

Educational Policy Frameworks

STEM Research Enhanced

STEM Research Neglected

Technological ,Economic ,Financial ,Agricultural, Environmental Social Development

Lack of Development and Retrogressive Economies

Justification for Re-Imagining African Research Culture

- Embrace equality, diversity & inclusion in research practice.
- National and International Policy Frameworks to Promote R&D
- Support for STEM Mid-term Carrier and Professionals .
- Provision of Funds for STEM research networks and institutions.
- Pursuits of long and short-term research Outcome

# **ISSUES IN STEM RESEARCH POLICY IN AFRICA**

- Higher education and research in Africa has been marginalized in international development cooperations due to backwardness in research skills
- Higher education and research in Africa in the 2000s was placed at the heart of merely knowledge-based development and poverty reduction., supported by the MDGs.
- Research Operational Policies are Framed to support Short-term Output

## **ISSUES.... CONTINUED**

- **Declining Investment in Research .**
- **While Africa carries about 20% of the global burden of disease, Its scientific output represents less than 1% of the world's share..**
- **Inadequate Research Skills of Researchers.**
- **Ineffective Institutional Leadership. For instance Corruption and bad governance are significant variables affecting the quality of teachers in STEM education in Nigeria.**

# PROSPECTS OF STEM RESEARCH AND EDUCATION IN AFRICA

Research efforts and developments undertaken by individuals, groups, institutions, organizations are worthy of consideration here.

Creating, Empowering and supporting existing research networks in Africa has been a way forward; eg

Higher Education Research and Advocacy Network in Africa (Herana) project ,led by the South African Centre for Higher Education Trust (CHET) , among several others produces internationally visible ,high level as well as locally relevant researches .

# PROSPECTS.... CONTINUED

African Research and Education Network was established to act as a focal point on ICT in education and research networking.

The African Academy of Sciences, based in Nairobi, Kenya, is a pan-African nonprofit institution that supports world-class scientific research.. They Engage in impactful researches contributing to Africa Development

IITA -Ibadan, Nigeria, is an award-winning research-for-development (R4D) organization, providing solutions to hunger, poverty, and the degradation of natural resources in Africa. Since 1967,

# PROSPECTS.... CONTINUED

Selected other research and education institutions in Nigeria are listed below:

- Institute for Advanced Medical Research and Training - IAMRAT
- Forestry Research Institute of Nigeria
- National Cereal Research Institute
- IAR&T Institute of Agricultural Research and Training
- Center for Bioethics and Research
- Success Point Educational Consult and Research Institutes

# **RE-IMAGINING STEM RESEARCH CULTURE AND EDUCATION POLICY FRAMEWORK IN AFRICA**

- **Staff at all levels need to act as good role models and demonstrate fair, collaborative and supportive behavior towards each other.**
- **There need to create clear processes for two-way communication between all groups, within and across different parts of the University**
- **Equality, diversity and inclusion in research development need to be ensured**

## **RE-IMAGINING STEM RESEARCH CULTURE...CONT.**

- **Prioritizing research funding for right facilities, support and infrastructure for researchers**
  - **National and internal policy frameworks need to support STEM research and educational institutions leaders' commitment to R&D**
  - **There is need foster long-term international collaboration in research and publishing.**
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# CONCLUSION

“Nevertheless, where there is practically no scientific research culture in existence, it is important to examine how the institution functioned without it and how it could be helped to function by introducing one. Leaders need a strict code of conduct and relationship-to build effective and implementable research and educational policy for development of Africa”



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