

Strengthening innovation and development research capacity in African universities: Lessons from AfricaLics

The Transformation of Research in the South:
Policies & Outcomes Conference

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Outline

- Introduction - why strengthen Academic Research Capacity (ARC)?
- Lessons from AfricaLics in building research capacity on innovation and development in Africa
- Recommendations for strengthening ARC in African Universities

Introduction:

Why focus on academic research?

- The perceived role of universities in innovation (**three missions**) include:
 - i. producing **skilled human capital** by training people in different scientific fields
 - ii. generating new social and technological innovations and knowledge through **research** that increase productivity and economic efficiency (**exploitation & commercialization of research**)
- Ultimate aim of academic research should be to **support inclusive innovation for social and economic development**
 - There are challenges in achieving the above.

Introduction cont'd: some challenges faced by African Universities

The **numerous efforts** by universities to promote or become innovation nodes are acknowledged - creation of spin off companies, science parks, clusters, innovation hubs etc **but** there are many challenges e.g.

- University- government- industry linkages are absent; some are fragmented and weak; some actors lacking in the triple – helix (multiple helix recommended – including public and civil society).
- Problems related to quality and relevance (R & D versus meeting the societal needs), weak research and innovation capacities, inadequate resources for infrastructure development, and human development and retention.
- In the backdrop of the above; **then how can Universities play their generative and developmental roles (or innovation role?) to ensure economic development in Africa?**

BUILDING INNOVATION RESEARCH CAPACITY FOR DEVELOPMENT

Experience from AfricaLics

(African Network for the Economics of Learning, Innovation and Competence Building Systems)



AFRICALICS

The role of AfricaLics

- AfricaLics launched in March 2012 in Dar, Tanzania
- Major objective: To promote the development of science technology and Innovation (STI) research capacity in Africa with strong links to users
- AfricaLics goal is to: Enable African countries to develop the capacity to study, monitor and evaluate their innovation systems and to develop evidence-based policies for the betterment of society.
- AfricaLics vision is to: see African countries **developing and utilizing high quality research**, conducted by **African researchers**, to **enable more informed policy decisions to be made relating to the use of STI for economic and social development** by business practitioners, civil society and policymakers in the public sector.
- African Centre for Technology Studies (ACTS) hosts the AfricaLics Secretariat
 - ACTS is a knowledge think tank that seeks to accelerate Africa's Transition to Inclusive Knowledge and Green Economies through research, policy, capacity building and technology brokerage in key emerging technology areas and sustainable development challenges in Africa (visit www.acts-net.org)

AfricaLics guiding principles in research capacity building

- Research efforts must focus on understanding **how and why innovation should be promoted, analysed and evaluated** for economic and social development (*as opposed to focusing only on how it can be conducted*).
- Research needs to be a less isolating activity; **networking and self-organization** is key including across traditional disciplinary boundaries, organizations and nations.
- Researchers have a duty **to give back to society** both in the focus of their studies but also through their actions.

AfricaLics approach to RCB

Activities under the Sida funded project have been advanced through an approach that is characterised by the following:

- A low-cost model (students & academics are only away from home institutions for a short period); drawing on partnerships, synergies etc
- A specific focus on the analysis of innovation activities

The results have been:

- A **thematic research network-based approach** where activities at global, regional and national levels **complement each other**
- **Enhanced partnerships on innovation & Development** at different scales - North-South; South-North and South-South
- A strong focus on **creating synergies between various types of activities:**
 - PhD academies, conferences and a visiting PhD fellowship program
 - working with selected partner universities and research groups to develop research and research training capacity.

Some achievements

Activity	Outputs and outcomes
PhD Academies	<ul style="list-style-type: none"> • 3 academies held (Nairobi, Algiers, Mombasa) and 77 students trained • A further Academy (Tunis) to be held in March 2016 involving approximately 25 students • Students self-organised post academies activities (e.g. social media platform)
Teaching material development	<ul style="list-style-type: none"> • One semester length module on innovation and development developed and available open access; the elements being used in at least 2 universities • One model 'Innovation and Development' MSc programme outline developed and made available open access
PhD supervision training	<ul style="list-style-type: none"> • 3 experience sharing sessions held with a total of 41 PhD supervisors • Handbook on PhD supervision for both students and supervisors available on AfricaLics website
PhD visiting fellows scheme	<ul style="list-style-type: none"> • 6 students selected and participated in the first round in 2015. 5 more will visit Denmark in 2016. • One PhD student has completed early as a result of the trip. Two others have submitted international journal papers. • One student has been offered to finalise his PhD as a joint degree with Aalborg University • Two students now involved in development of a networked post-doc capacity building research project between Aalborg University, their universities and others in Africa
Research conferences	<ul style="list-style-type: none"> • 2 conferences held (Mozambique, 2013 and Kigali, 2015) • First conference resulted in 8 research networks being set up • Second conference drew 220+ participants; 57 papers presented; 9 posters; 28 other speakers.
Research grants	<ul style="list-style-type: none"> • 19 initial applications. Eight proposals approved for funding. Six received funding ranging from US\$10,000 to US\$ 35,000. • All six projects have created networks of researchers who continue to work with each other. • 3 special journal issues and one published study report.
Networking	<ul style="list-style-type: none"> • Over 1million website hits, • AfricaLics YouTube channel set up to enable all videoed presentations and seminars to be available for view live or post-event.

Past AfricaLics events



2nd international AfricaLics conference – Kigali, Rwanda, November 2015



Lessons for a holistic academic research capacity building approach/initiative

- Rethinking traditional full PhD and Masters training activities
 - AfricaLics focuses on **augmenting the skills and opportunities for students through provision of additional support that is lacking in the students' home universities**
- Emphasis on **institutional capacity building and buy-in** which are key to successful individual capacity building
 - Emphasis has been on capacity building of individual PhD students with some capacity building at institutional level (partner universities);
 - Major emphasis on strengthening networks of partnerships between Africa; and between North and South.

Lessons continued

- Focus on **strengthening networks of researchers across universities and countries**
 - AfricaLics highlights the importance of **more general networking activities** that enable researchers to **interact informally** and lead to spontaneous as well as more channelled networking activities
- Focus on building an African ‘innovation and development’ research community
 - Focus is i) **Africa** and ii) **analysis of innovation activities** and how they meet the economic and social development needs of African nations

Rethinking Academic Research Building: the role of universities in innovation training?

- We note that formal training at Universities is extremely important
 - **But -there is inadequacy of understanding of what is 'innovation' and training in 'innovation' in universities**
- There is need for universities to move beyond Innovation Management /Innovation & entrepreneurship training etc to **'innovation and development'** – the latter is problem solving oriented – especially focusing on the role of informal sector, youth and gender among other things
 - **Requires the study of power, politics, values and cultures (social science oriented?)**
- Perhaps Universities should mainstream innovation into their curriculums just as some have already mainstreamed development studies modules?
 - **Such efforts would enhance students get a better sense of the problems affecting their countries (in the case of development studies) and some of the ways of solving them (in the case of innovation studies).**
- **Mainstreaming development and innovation studies** helps graduates become more socially responsible upon completion of education.
 - Few universities are trying to mainstream innovation across all faculties – e.g. University of Dar es Salaam

Rethinking Academic Research Building: the role of universities

The focus should be to build **a wider research culture beyond Science, Technology, Engineering & Mathematics (STEM)** through:

- Educating more graduates with a focus on **solving practical problems** – (problem based learning) - making them more employable.
- Focus attention on the wider developmental role of universities through enabling graduates to become **better critical thinkers and innovators**.
- Refocus on '**doing, using and interacting**' (harness experience-based learning)
- Rethink innovation: understanding **why it is important** and not just how to do it .
- Work with **policy makers** to ensure development of **solid & effective innovation systems** in Africa

AfricaLics next steps

- Phase 2 will upscale what has worked well towards building up stronger research capacities in the social sciences, analysis of innovation activities and of linkages between innovation & development.
- Phase 2 will include i) continuation of PhD academies, AfricaLics conferences and the PhD visiting fellowship programme ii) small and medium sized grants iii) post-doc research capacity development under one major project

THANK YOU FOR LISTENING