

Building a Strong Undergraduate Research Culture in African Universities

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ABSTRACT

Africa had a late start in the race to setting up and obtaining universities with research quality fundamentals. According to Mamdani [5], the first colonial universities were few and far between: Makerere in East Africa, Ibadan and Legon in West Africa. This last place in the race, compared to other continents, has had tremendous implications in the development plans for the continent. For Africa, the race has been difficult from a late start to an insurmountable litany of problems that include difficulty in equipment acquisition, lack of capacity, limited research and development resources and lack of investments in local universities. In fact most of these universities are very recent with many less than 50 years in business except a few. To help reduce the labor costs incurred by the colonial masters of shipping Europeans to Africa to do mere clerical jobs, they started training “workshops” calling them technical or business colleges. According to Mamdani, meeting colonial needs was to be achieved while avoiding the “Indian disease” in Africa -- that is, the development of an educated middle class, a group most likely to carry the virus of nationalism. Upon independence, most of these “workshops” were turned into national “universities”, but with no clear role in national development. These national “universities” were catering for children of the new African political elites. Through the seventies and eighties, most African universities were still without development agendas and were still doing business as usual. Meanwhile, governments strapped with lack of money saw no need of putting more scarce resources into big white elephants. By mid-eighties, even the UN and IMF were calling for a limit on funding African universities. In today’s African university, the traditional curiosity driven research model has been replaced by a market-driven model dominated by a consultancy culture according to Mamdani (Mamdani, *Mail and Guardian Online*). The prevailing research culture as intellectual life in universities has been reduced to bare-bones classroom activity, seminars and workshops have migrated to hotels and workshop attendance going with transport allowances and per diems (Mamdani, *Mail and Guardian Online*). There is need to remedy this situation and that is the focus of this paper.

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1. INTRODUCTION

Africa had a late start in the race to setting up and obtaining universities with research quality fundamentals. According to Mamdani (Mamdani, *Mail and Guardian Online*), the first colonial universities

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were few and far between: Makerere in East Africa, Ibadan and Legon in West Africa. This last place in the race, compared to other continents, has had tremendous implications in the development plans for the continent. For Africa, the race has been difficult from a late start to an insurmountable litany of problems that include difficulty in equipment acquisition, lack of capacity, limited research and development resources and lack of investments in local universities. In fact most of these universities are very recent with many less than 50 years in business except a few. Even with these few that have relatively a long history of educating Africa's young minds, their missions were not genuinely, at least at the start, for developing African nations other than educating low level and half-baked Africans to help reduce the labor costs of the colonial masters who were finding it increasingly expensive to ship Europeans to Africa to do mere clerical jobs. To solve this problem, they started training "workshops" calling them technical or business colleges. According to Mamdani, meeting colonial needs was to be achieved while avoiding the "Indian disease" in Africa -- that is, the development of an educated middle class, a group most likely to carry the virus of nationalism.

At independence, most of these "workshops" were turned into national "universities", but with no clear role in national development. These national "universities" were catering for children of the new African political elites. Cast into new roles of national administrators with little to no preparations, the new African elites did not formulate development agendas for these universities. So many of them continue to float with no development agenda only teaching students for personal prosperity, thus leading to the mass migration of the educated Africans to Europe and North America. Through the seventies and eighties, most African universities were still without development agendas and were still doing business as usual. Meanwhile, governments strapped with lack of money saw no need of putting more scarce resources into big white elephants. By mid-eighties, even the UN and IMF were calling for a limit on funding African universities.

In today's African university, the traditional curiosity driven research model has been replaced by a market-driven model dominated by a consultancy culture according to Mamdani (Mamdani, *Mail and Guardian Online*). This has led to negative consequences for education and research. The consultancy culture is institutionalized through short courses in research methodology, courses that teach students a set of tools to gather and process quantitative information from which to cull answers. In this environment, researchers will become managers whose real work is to supervise data collection (Mamdani, *Mail and Guardian Online*). Mamdani summarizes the prevailing research culture as intellectual life in universities reduced to bare-bones classroom activity, seminars and workshops have migrated to hotels and workshop attendance going with transport allowances and per diems.

2. Challenges, Bottlenecks and Problems in African Research

According to Mamdani (Mahmoud Mamdani, *online*), many of the problems existing in the African institutions of higher education that are hindering research include:

- Heavy teaching responsibilities leading to - little time for research
- Reluctance of the state to finance research
- Low pay - so would be researchers are often reluctant to use part of their salary for research, leading to a preference of consultancies to improve their salaries
- Low and decreasing numbers of senior professors
- Deterioration in the general education standards
- Mushrooming universities

Sawyer (Sawyer, 2004) notes that current African institutions lack:

- Vision
- Appropriate policy frameworks
- Strategic planning
- Service culture within the structures responsible for administering, coordinating, and promoting research
- Reliance on individual rather than team or multidisciplinary research work thus limiting the capacity of researchers to undertake fundamental work with significant breakthroughs
- Weakness of graduate study and postdoctoral training and its effect on the research environment

3. Essentials Basics for Research for both Undergraduate and Graduate Students

For any institution of higher learning be it in Africa or elsewhere, to claim to foster research at both undergraduate and/or graduate levels, there are essential basics, forming the building blocks of basic research that must be in place for any meaningful research to start and take root. Sawyerr (Sawyerr, 2004) outlines the following three conditions to build intellectual environments that are strong enough to sustain meaningful intellectual culture.

1. Policy and Resources

Public policy and resource allocation in which research interests and individual capacity are rooted in the quality of education in the society generally. The policy must consist of:

- Educational systems that encourage and equip people to be curious about nature and society and to develop interests in the pursuit of knowledge and ideas that create indispensable general condition for the development and sustenance of a research culture,
- Broad social policies and practices that encourage and facilitate the flow of information and reward innovation and inquiry,
- Social recognition of achievement and the ready utilization of good ideas provide nonmaterial but powerful incentives to research excellence and innovation, and
- Available and adequate ways means for undertaking research for those interested.

2. Institutional Conditions

Institutions must create an environment in which the conditions are conducive and encourage research. Such environment should consist of:

- A minimum research infrastructure, such as laboratories, equipment, libraries, and an effective system of information storage, retrieval, and utilization;
- Appropriate management systems, and
- Policies and incentives that facilitate and support the research enterprise including incentives that recognize and reward high-calibre research.

3. Research Management

No institution can claim to support research without a basic research management framework. This many include developing and providing essential project support, management skills, and services that the individual researcher, or even project team, could not be expected to deploy on his/her/their own.

4. Steps Needed to Strengthen African Research

Against this somber general background, a number of steps need to be taken to improve the quality of research in African universities. These include (Alioune Camara and Kathryn Toure, Akilagpa Sawyerr):

- Mentorship of junior faculty and strong supervision of graduate study
- Creating collective or networked research pools
- Adequate institutional framework at the national level for the definition and communication of research priorities
- Institutional support to research centres and laboratories and the development of synergies amongst research teams
- Continuous consultation and dialogue with users of the research
- Inventories and evaluations of research conducted within the university
- Effective mechanisms for funding research

- Developing curricula that emphasizes developing relevant solutions and best practices, in all areas of development, to solve these problems and deal with the challenges.
- Building a culture needed to promoting the use of scientific and technological tools and best practices to solve emerging local problems and challenges
- Strengthening the newly developed research capacity through continuous improvement like the setting up of African Research Academies
- Establishing an African Center of Excellence for Innovative Solutions for Emerging Economies for sustainable relevant research and development solutions

5. Providing undergraduate research opportunities and collaborations across international boundaries

With the above situation, how can we encourage both non-African and African undergraduate students to benefit from any research opportunity and collaboration across the international boundaries, given the many research opportunities available to non-African students in many African universities and the African research space? Several approaches worthy of discussion are available including student exchanges where African bound non-African students carefully identify researchable problems and opportunities in a country of choice. Then, with the help of a student's home institution research advisor and host institution advisor, students take a study tour abroad with a research goal.

6. What others are saying:

- A PERVASIVE CONSULTANCY CULTURE

Today, intellectual life in universities has been reduced to bare-bones classroom activity. Extra-curricular seminars and workshops have migrated to hotels. Workshop attendance goes with transport allowances and per diem. All this is part of a larger process, the NGO-ization of the university. Academic papers have turned into corporate-style power point presentations. Academics read less and less. A chorus of buzz words have taken the place of lively debates (Mamdani, *Mail and Guardian Online*)

- Mahmood Mamdani: African Universities Breed “Native Informers”, Not Researchers
A leading East African political scientist, Prof. Mahmood Mamdani, who is the director of Makerere University's Institute of Social Research has put universities in Sub-Saharan Africa in the dock by accusing them of not creating researchers but churning out native informers to national and international non-governmental organisations. (Mamdani, *Mail and Guardian Online*)
- Now, new statistics from the United Nations Educational Scientific and Cultural Organisation (UNESCO) reveal that the entire African continent contributes only 2.3 per cent of the world's researchers. (*Wachira Kigotho, online*)
- UNESCO estimates that on average, Africa has only 169 researchers per one million inhabitants. Apart from having the lowest density of researchers in the world, investment in research and development in Africa stands at 0.9 per cent. (*Stepps in Sync.*)

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