

Research Application Summary

**African Universities by numbers: Monitoring and evaluation dilemma**

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**Abstract**

This article draws from experiences of engaging African Universities to assemble basic data on their training and research performance which ordinarily would be readily available as a good practice for internal and external accountability, and specifically to respond to the requirements of higher education regulatory frameworks. The difficulty in obtaining this data is a testimony that there is little attention by universities to establish and institute the basic monitoring and evaluation framework to track and assess their performance. This paper gives the general overview and draws lessons from different education systems outside the continent to which African universities may consider putting into consideration. The old paradigm of business as usual is long gone. Universities need to rethink on how they position themselves into the development space which requires advancement in results based monitoring and evaluation frameworks that are oriented to development goals and system functioning. The rationale for investment in higher education to a larger extent is dependent on how universities demonstrate quality evidence and substantiation of progress on particular dimensions of the industry progress markers.

**Key words:** African universities, evaluation, Higher Education, monitoring, performance Indicators

**Résumé**

Cet article puise des expériences d'engagement des universités africaines pour assembler des données de base sur leur formation et les performances de recherche qui seraient normalement facilement disponibles comme une bonne pratique pour la reddition de comptes interne et externe, et en particulier pour répondre aux exigences des cadres réglementaires de l'enseignement supérieur. La difficulté d'obtention de ces données témoigne le manque d'attention des universités pour établir et mettre en place le cadre de suivi et évaluation de base pour suivre et évaluer leur performance. Ce document donne l'aperçu général et tire des leçons de différents systèmes éducatifs en dehors du continent lesquelles les universités africaines peuvent adopter. L'ancien paradigme des affaires d'habitude est révolu. Les universités doivent repenser la façon dont elles se positionnent dans l'espace de développement qui nécessite une avancée dans les résultats des cadres de suivi et d'évaluation qui sont

orientés vers des objectifs de développement et le fonctionnement du système. La justification de l'investissement dans l'enseignement supérieur dépend dans une large mesure de la façon dont les universités démontrent la preuve de la qualité et la justification des progrès sur les dimensions particulières des marqueurs du progrès de l'industrie.

Mots clés: Universités africaines, évaluation, enseignement supérieur, surveillance, les indicateurs de performance

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## Introduction

According to Jerven (2015), Kerner *et al.* (2015) and Jerven (2016), there is severe lack of accurate data on most of Africa development indices leading to macroeconomic statistical inaccuracies that make it difficult to successfully monitor public sector performance. Jerven (2016b), termed this as the “Africa statistical tragedy”. This outlook is not only limited to critical sectors of the economy, but also afflicts African higher education institutions. Data on even basic information such as student numbers, staff numbers by qualification and discipline, capital and recurrent expenditures, are alarmingly difficult to come by. In most African public universities, there is severe shortage of good quality data. Damtew (2016) put it more bluntly, that some African universities cannot even answer basic questions about their own operations because they lack data. And yet, African higher education is experiencing unprecedented expansion that need fundamental evidence based data to institute adaptive transformations to attract investments and promote higher education institutions’ relevance in national and international development space.

Importantly, there are already concerns that African universities are not producing sufficient numbers of skilled graduates as required for expanding and diversifying Africa’s economy. Additional concerns also indicate that there is poor quality of higher education to equip graduates with skills to fully address the current continental development challenges (UNESCO, 2015). The remarkable economic growth, boosts in productivity over the recent past years and demands for human capital that is skilled to meet the demand of industry are instructive of the need for African universities to invest in data acquisition. This is necessary in order to realign with the new performance-based funding models, institutional contracts and public accountability policies to ensure that higher education meets the desired social and economic objectives (Hazelkorn, 2011). This comes at the backdrop of over a decade of under-investment in higher education in Africa, partly instigated by lack of credible evidence that indeed higher education offers significant returns to national economies and that these returns could place the African continent into a more lucrative knowledge economy (Michaelowa, 2000; Barro 2002; Shaffer and Wright, 2010). This new economic motivation is pressurising higher education institutions to be more accountable, more efficient, and productive and use public generated resources efficiently (King, 2000; De Boer *et al.*, 2015). The status quo is no longer a viable option for public higher education institutions, the trend demands for multidisciplinary and evidence based approach to lead to the desired change (Ryan *et al.*, 2008).

The Regional Universities Forum for Capacity Building in Agriculture (RUFORUM) is working with its 60 Member Universities to transform university role and image by developing innovative programmes that not only generate innovations, but are directed at improving the welfare of especially rural communities, the majority of whom are smallholder farmers. For African universities to deliver on this mandate, there is need to understand themselves better by periodically updating their performance indicators as demanded by the respective countries' national higher education frameworks to serve both internal and external accountability functions. The fundamental characteristics of national higher education policies worldwide is that they provide a comprehensive framework for monitoring and evaluation but some fail to put into context that the traditional academic understandings of quality are under deeper scrutiny from market driven, corporate style criteria, measured and controlled by accounting and managerial techniques imported from the data driven civil society and private sector (Maingot and Zeghal, 2008; Ryan *et al.*, 2008). According to Rowe (2004), the collection and analysis of performance data allows universities and their constituent organizational elements to: (1) formulate strategic policy priorities and their related targets, (2) specify achievable objectives, (3) implement them, and (4) evaluate the extent to which the targets were achieved. Considering this at an African perspective, apart from Southern African universities, the majority of universities in Africa have not paid critical attention to this school of thought. The precondition for this to happen requires universities to have strong governance systems; resources, commitment to, and understanding of, the need for data for evidence based strategic engagement and clear linkages to policy.

There are already standard performance indices (see Table 1) for higher education institutions benchmarked at multiple levels (Chalmer, 2007; Guthrie and Nuemann, 2007; Chalmer, 2008). African universities should think of allocating both financial and human resources and make modest attempt in assembling data. Table 1 highlights required information at various institutional levels.

**Initiatives for monitoring Africa's scientific and technological developments.** Despite the current phenomenon, there are continental and regional initiatives that are taking bold moves and strategic investments in collecting data and putting into place open source repositories on Africa's research and development indices to support evidence based policy making. The NEPAD's African Observatory of Science, Technology and Innovation (AOSTI), an initiative under the African Consolidated Plan of Action (CPA), approved by African Heads of State, is spearheading the development of internationally comparable and adoption of Science and Technology indicators to monitor Africa's scientific and technological developments. The initiative set up a repository with a mission "to champion evidence-based science, technology and innovation policy-making by backstopping African countries to manage and use statistical information in accordance with the African charter of statistics". The initiative has been adopted and institutionalised within the continental governance super-structure. This is seen as the first holistic attempt to collect data and draw comparisons of research and development outputs across all disciplines on the African continent. However, there is mixed commitment among African governments on the pledge to support this initiative through fulfilling the allocation 1% of the Gross National Expenditures to Research and Development. As such, there is slow progress in updating the repository.

**Table 1. Indicative higher education performance indicators**

Level of performance	Input	Output	Outcome	Process
National	Resource provision, Infrastructure, Curriculum committees, Staff qualifications/experience, Student/staff ratio, Enrolment rates by type of student, and Explicit goals and standards	Graduate employment data, Student progress rate, Retention rate, Graduation rate, Research higher degree productivity rate	Graduate employment status, Evaluation of teaching performance, Student feedback, Student acquisition of generic skills and Student engagement	Appropriate balance of staff time in teaching, research, administration, consulting and community activities, Active and collaborative learning and Study/work, environment
Institution	Enrolment rate, Student/staff ratio, Provision of support services, Teaching experience/qualifications	Graduate employment rate, Retention rate, Graduation rate, Citation/publication rate of research	Stakeholder satisfaction/engagement, Value of graduates, and Quality of research	Mission statement, Academic innovation and creativity, Visionary leadership, Accommodation for student/staff diversity, Link research to teaching, Learning community and Institutional climate
Department/Programme	Enrolment rate, Student/staff ratio, Teaching experience/qualifications, and Explicit learning outcomes	Retention rate, Citation/publication rate of research	Stakeholder satisfaction/engagement, Value of graduates and Quality of research	Accommodation for student diversity, Student centred approach, Use of current research in informing teaching and curriculum content, specific, continuous and timely feedback, and Community engagement

**Table 1.** Contd.

Level of performance	Input	Output	Outcome	Process
Lecturers	Teaching experience qualifications Explicit learning outcomes	Graduate employment rate Student progress rate Graduation rate	Student learning outcomes	Accommodation for student diversity, Student centred approach, Communication skills, Possession of desirable, teacher characteristics Specific, continuous and timely feedback, Use of current research in informing teaching and curriculum content, community engagement/partnership
Student	Staff teaching qualifications, Resource provision, Class size, Student background characteristics, Explicit student learning outcome statement	complete	Student learning outcomes, student satisfaction, Graduate skills, Student engagement, Student – community motivation for life-long learning	Social involvement, Facilitation and valuing of diversity, Diversity interactions, Learner-centred environment, Peer collaboration, and Student engagement

Adopted from Charmer, 2007

Secondly, is the Centre for Higher Education Transformation (CHET) Higher Education Research and Advocacy Network (HERANA) initiative working with eight African universities in Eastern and Southern Africa. This is a multi-phased initiative that innovatively developed, piloted, and currently making efforts to institutionalise collection of data on core academic performance parameters in pilot African universities. HERANA generated empirical evidence and demonstrated that there is a positive correlation between higher education investment and output, with development, specifically in African context. It also proved that investing in data repositories improves performance of higher education institutions.

Thirdly, RUFORUM, as a university membership organisation, is engaging member universities and collecting data on selected indicators to characterise and gain deeper understanding of each of the network members so as to equitably service the network and provide members' goods. In 2015, RUFORUM and IFPRI ASTI launched an initiative of collecting data on human resource capacities, research investment and academic performance in African universities and setting up an online open source portal. IFPRI/ASTI's has over two decades of experience in collecting data on human capacities and investment in the agricultural research sector. Over the years ASTI/IFPRI has developed a data management system and a set of online data presentation tools that have continued to inform continental and global agricultural research and development policy agenda. By extension, RUFORUM is building on a similar system for its member universities and supporting them to institute robust monitoring and evaluation systems for set of internationally comparable indicators for Africa's higher education. Such an indicator system exists for agricultural research, but mostly lacking for higher education in Africa. RUFORUM's envisions the partnership with IFPRI/ASTI will help to provide (a) better understanding of African universities and the Science Technology and Innovation capabilities with the Africa context (b) strengthen the national and regional capacity development policy formulation and implementation, and (c) promote mobility and cooperation among higher institutions. The portal on human resource capacity and research output data for agricultural higher education in Africa will be open access. This portal will also allow to make comparisons among Africa universities.

The RUFORUM asset is the 60 vice-chancellors from 25 countries with diverse disciplines and experience, and collectively bring on board focussed understanding of research and development to provide leadership and guidance in designing of the portal. The Deans and Principles and the Universities Quality Assurance and Planning Units play a catalysing role in data collection, validation, analysis, and use. RUFORUM as a network has a continental convening capacity due to its reputation as well as relationship with the African Union Commission and other key research and development institutions and practitioners. ASTI/IFPRI and RUFORUM oversees the data collection, validation, synthesis, and analysis directly in response to the decision of the vice-chancellors taken in Windhoek in August 2015, and as well as the wider sector. The analysis will inform RUFORUM vice-chancellors, and other decision makers as well as high-level initiatives especially the Science, Technology and Innovation Strategy for Africa (STISA), the Science Agenda for African Agriculture (S3A), the Comprehensive African Agricultural Development Programme (CAADP), and others, in support of agricultural higher education reforms and economic development in Africa.

## **Conclusion**

Unlike other development sectors that have been rigorously studied and models developed for monitoring and evaluation, the higher education sector seems to be lagging behind. The fundamentals are that there are internal structures and systems for quality control supported by legal and policy framework of the countries' National Higher Education regulatory bodies. The national council's role, among other mandates, is to monitor, evaluate and regulate higher education institutions. Therefore, compliance with national policies and regulation should not be the only motivation for universities to institute internal monitoring and evaluating frameworks, but to foster greater efficiency and accountability within universities (Burke and Minassians, 2001). African universities should also institute monitoring and evaluation frameworks to ensure that they have credible evidence on their performance towards achieving the multi-dimensional role of training, research and outreach (Chalmers, 2008; Paradise *et al.*, 2009). They need to rethink on how they position themselves into the development space which requires advancements in results based monitoring and evaluation that is oriented to development goals and system functioning. This approach is currently advocated and is the blueprint for multilateral agencies such as the World Bank, United Nations and other International Agencies. Cherednichenko and Yangolenko (2013), provide comprehensive conceptual models for quality evidence and quality monitoring framework for higher education institutions. African Universities should consider borrowing from such frameworks.

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