

Shaping Quality Assessment and Open Science Practices in African Research

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What's New?

New evaluation systems for research assessment are being developed by organisations like DORA¹ (USA), CoARA and Plan S (Europe)² to replace metrics and analytics counts that are being used in academic publishing and scholarly communications for promotion, tenure, and hiring in the academic research ecosystem.

The underlying principle of the new evaluation systems is to assess research based on its intrinsic qualities and merits rather than relying on proxy measures such as the journal of publication or the journal impact factor.

Why does it matter?

- The ranking system is at the root of global inequality and academic colonialism,³
- Research is directed towards subjects that are more important for northern countries and less relevant for African local societies.
- Ranking serves the “Knowledge Economy”⁴, where research is judged by economic standards (profits), competition, and exclusiveness. Yet African researchers with limited research funds and grants are burdened with pay-to-publish and closed-access publishing models to meet promotion or hiring criteria, competing with the standards of the global north.

¹ San Francisco Declaration on Research Assessment. <https://sfdora.org/read/>

² Coalition for Advancing Research Assessment <https://coara.eu/>;
Responsible Research Assessment and Evaluation <https://www.coalition-s.org/responsible-research-assessment-and-evaluation/>

³ Open access publication: Academic colonialism or knowledge philanthropy.
<https://www.sciencedirect.com/science/article/abs/pii/S0016718520300841>

⁴ Socially Responsible Higher Education. <https://brill.com/edcollbook-oa/title/59847>

What should be done?

1. Research assessment system:

Evaluation system based on societal impact and collaboration with non-academic audiences.

Incentivise other research outputs (preprints, post-prints, research data, open peer review reports) and open access publishing roles as part of assessment reforms.

- Policy: Open access publishing be made default by national governments; this should be included as a criterion for all publicly funded research.
- Infrastructure: Shared open scholarly publishing infrastructure is made available to promote collaboration in community-driven governance framework for coherence and sustainability.
- Promotion of publishing and research on indigenous knowledge

Introduction

The use of metrics and analytics plays an obvious role in academic publishing and scholarly communications, influencing decisions related to promotion, tenure, and hiring in the academic research ecosystem. Habitually, the metrics for measurement are determined by the global north and have increasingly been recognised for limiting the quality and wider impact of research, thus creating inequality between the global north and south.

In response to this inequality, various projects, programmes and infrastructure have been initiated to address the challenges of an unequal global knowledge production ecosystem. In Africa, there has been a relatively fair adoption of infrastructure associated with these initiatives, such as institutional repositories and open source solutions for managing and publishing scholarly journals online. However, changes in perceptions, policies, succession plans, and practices remain largely unresolved. Hence, these initiatives are primarily focused on addressing the visible symptoms of the problem⁵ rather than tackling the underlying inequities in global research.

Furthermore, new evaluation systems are being developed by organisations like DORA⁶ (USA), CoARA and Plan S (Europe)⁷. These evaluation systems provide guidelines, funding models, toolkits, and proposals to support academic institutions working to improve policy and practice. The underlying principle of these evaluation systems is to evaluate research based on its intrinsic

⁵ Changing Africa's Position in the Global Knowledge Production Ecosystem. <https://journals.codesria.org/index.php/codesriabulletin/article/view/5058>

⁶ San Francisco Declaration on Research Assessment. <https://sfdora.org/read/>

⁷ Coalition for Advancing Research Assessment <https://coara.eu/>; Responsible Research Assessment and Evaluation <https://www.coalition-s.org/responsible-research-assessment-and-evaluation/>

qualities and merits rather than relying on proxy measures such as the journal of publication or the journal impact factor. Bringing it closer home, some countries in the Global South are also actively contributing to the development of new research assessment systems. The Latin American Forum on Research Assessment (FOLEC-CLACSO) has taken the lead in formulating policies and practices for research assessment processes in their region.

However, despite the equity of these newly established evaluation systems, certain aspects may pose challenges or be inappropriate for institutions or governments on the continent because they lean heavily on the opinions of the Northern research community and largely ignore specific needs and conditions that exist in African countries.

Need for new quality assessment systems in Africa

Several governments in the global North have started to change policies to reflect alternative research systems. For instance, the recognition and rewards reform programme⁸ in the Netherlands focuses on the content of what researchers themselves see as their best achievements and skills, like teaching and collaboration. For the Spanish government⁹ assessments will no longer consider only the impact factor of the journals in which scientists publish but also details such as whether the research reaches non-academic audiences through news reports or government documents. Papers will also score more highly when co-produced with local communities or other non-academic authors. In an attempt to reduce the level of public funds spent on publication costs, assessors will consider papers published on non-commercial, open-access publishing platforms that don't charge author fees.

There are many reasons for African universities to abandon the ranking system as well. Apart from being at the root of global inequality and academic colonialism¹⁰, an important effect of the prevalent ranking and evaluation system is that research is directed towards subjects that are more important for the Northern countries and less relevant for local societies. This has put African countries as subjects to be studied rather than subjects that determine scientific significance. For instance, in African nations now, the research agenda is determined to a large extent by the Sustainable Development Goals (SDGs), which act as a de facto confirmation framework¹¹.

Additionally, ranking serves the "Knowledge Economy"¹², where research is judged by economic standards (profits), competition, and exclusiveness. This system is firmly in place because of the huge profits made by the scientific research publishing industry. Paradoxically, some of the hugely funded institutions and governments of the global north are either opting for [non-profit providers](#), establishing open [non-profit publishing platforms](#), or [negotiating deal agreements](#) with

⁸ <https://recognitionrewards.nl/>

⁹ <https://www.science.org/content/article/spain-wants-change-how-it-evaluates-scientists-and-end-dictatorship-papers>

¹⁰ Open access publication: Academic colonialism or knowledge philanthropy. <https://www.sciencedirect.com/science/article/abs/pii/S0016718520300841>

¹¹ Changing Africa's Position in the Global Knowledge Production Ecosystem. <https://journals.codesria.org/index.php/codesriabulletin/article/view/5058>

¹² Socially Responsible Higher Education. <https://brill.com/edcollbook-oa/title/59847>

subscription-based databases and indexing services, taking into consideration open science principles. Yet African researchers with limited research funds and grants are burdened with pay-to-publish and closed-access publishing models to meet promotion or hiring criteria, competing with the standards of the global north. An attainment that cannot be realised as the odds of success are skewed in favour of the global north. What is more interesting is the fact that most university libraries cannot afford the high subscription rates for the databases where the articles of their researchers are published. For African countries, it makes a lot more sense to forge their standards for publishing and evaluating research based on the [principles of open science](#), cooperation, sharing, and societal relevance. Where the knowledge economy fits Western societies best, this other system, the knowledge democracy¹³, corresponds much better to the values of African societies, as shown by the example of [“Ubuntu”](#) and by actually living in a sharing community.

Interestingly, scholarly communication in the global south is more available than acknowledged. Over [4500 African journals](#) with different access models exist on various online platforms. Furthermore, 79.9% of 25,671 sampled journals¹⁴ on the Open Journal System (OJS) were from the Global South, with a remarkable 84.2% adhering to the OA diamond model. Additionally, outside of all of these figures, there is a lot of unaccounted scientific knowledge not published on digital platforms. Ironically, only 1.2% and 5.7% were indexed in profit indexing services like Web of Science (WoS) and Scopus, respectively, and sadly, these platforms are the criteria for global visibility. Thus, it is about time for Global South countries, notably African countries, to develop and implement their own ideas¹⁵ on doing, publishing, and evaluating their research instead of blindly adopting existing or newly developed Northern-centered systems.

Transitioning to Not-for-Profit indexing services

After identifying the challenges and needs of African [Open Access publishing communities](#) and at the end of the [Abuja Open Science symposium](#), it has become clear that the best road to an open science society is a reform of the research assessment system and a reconsideration of conventional research ranking and metrics. The emphasis on collaboration, openness, teaching qualities, and societal impact in alternative research evaluation is worth considering for countries in the Global South. As a matter of fact, there are criticisms¹⁶ of the increasing pressure on universities and researchers to comply with bibliometric performance and ranking systems from the north, which shifts focus away from intrinsic research¹⁷ and teaching evaluation. Some Northern universities (notably Utrecht University in the Netherlands) have also announced that

¹³ *ibid*

¹⁴ Recalibrating the scope of scholarly publishing: A modest step in a vast decolonization process. <https://direct.mit.edu/qss/article/3/4/912/114119/Recalibrating-the-scope-of-scholarly-publishing-A>

¹⁵ For African research to thrive, Africa must be in charge. <https://www.researchinformation.info/analysis-opinion/african-research-thrive-africans-must-be-charge>

¹⁶ university rankings and governance by metrics and algorithms. <https://zenodo.org/records/4730593>

¹⁷ Nobel winner declares boycott of top science journals. <https://www.theguardian.com/science/2013/dec/09/nobel-winner-boycott-science-journals>

they will no longer actively participate in rankings as these do not adhere to the principles of open science.

Ironically, the leadership of higher education institutions in Africa are entrenching further the biases of African scholarship to the margins of knowledge through the trend of assessing the standard of publishing using metrics and instruments developed and serving the commercial interests of the North. Some universities in sub-Saharan Africa started incentivising research outputs in journals indexed on commercial platforms that focus on citation metrics, driven to a large extent by the wave of top-cited researchers and international university rankings hype.

It is concerning that in some of these universities, researchers that publish in highly ranked northern journals are awarded, even though it is not required for promotion or tenure assessment.

The driver of many initiatives at both national and institutional levels in the African academic ecosystem is 'normative pressure'¹⁸—a system of adopting practices or innovations because stakeholders are embracing the same practice. While this approach has its advantages, particularly in terms of adopting global best practices, the lack of departmentalisation of knowledge and the short-term focus of most initiators at the top-level setback any progress made in the open access space. In most cases, the initiators move on to the next trending global 'shining project' without proper contextualisation or succession plans.

To sustainably institutionalise open science practices, the [Abuja conference](#) urged African policymakers like the Committee of Vice-Chancellors of Nigerian Universities (CVCNU) and higher education regulatory bodies to find ways to reform research assessment away from citation metrics and provide incentives for steering away from publishing in journals that are highly ranked in Northern commercially controlled indexing services. Quality in publishing can be maintained through indexing in not-for-profit indexing services like the Directory of Open Access Journals (DOAJ) and Directory of Open Access Journals (DOAB), rather than relying on commercial indexes like Web of Science and SCOPUS. In that way, African research could be controlled by the community, assessing its value by its impact and use for African societies, promoting local language publishing, and funding projects important for Africa.

Furthermore, recognising the value of local knowledge and taking charge of publishing and evaluation of African research constitute necessary steps towards the decolonisation of knowledge¹⁹ production, a production that has been controlled by northern countries for much too long. In the process, much of the indigenous knowledge has been at risk of becoming lost, but there is still time to take action. So, it is imperative that African institutions take steps towards fostering transparency, social responsibility and equitable access to research information that serves the community and not commercial interests. It is believed that this will build a more just and equitable information landscape for generations to come.

¹⁸ <https://www.tandfonline.com/doi/full/10.1080/10447318.2016.1199180>

¹⁹ https://zenodo.org/records/3946773#.YS_y-NNKg8M

For new quality assessment systems to be developed in Africa, there is a need for a broader perspective from the research community to understand and inform the metrics for the new system. The LIBSENSE regional policy development workshop, co-located with the WACREN conference coming up in March 2024, is expected to produce a national open science policy. This forum can be leveraged to express opinions and contribute to shaping a responsible research assessment guideline that aligns with the needs of African researchers and is in tandem with global open science best practices. We hereby call on all stakeholders in the higher education sector to join us in advancing new quality assessment policies that take cognisance of open science practices. It is time for the committee of vice chancellors and heads of research directorates, AULNU and other higher education regulators to be part of the ongoing dialogue, actively contributing to the advancement of new quality assessment policies that recognise open science practices and shape the future of regional research assessment development.

What needs to change

Research assessment system: Reforming the system of recognition and rewards requires a culture change as well as national and international coordination between all parties involved. Researchers will be evaluated based on societal impact and collaboration with non-academic audiences. In addition, we need to incentivise other research outputs (preprints, post-prints, research data, open peer review reports) and open access publishing roles as part of assessment reforms; a good opportunity is to include it as part of accreditation assessment requirements for libraries. Ultimately, this will entrench the culture of open science practices. For quality control, not-for-profit indexing services DOAJ and DOAB should be leveraged, with a bit of international recognition to hype universities looking the way of open science and adopting alternative metrics.

Policy: Open access publishing be made default by national governments; this should be included as a criterion for all publicly funded research. Furthermore, strengthen equitable partnerships among editors and publishers, libraries, RENs, funders, and other actors to provide immediate quality and sustainable open access to African research via journals, repositories, and other means supported by an evolving scholarly communication landscape while maintaining their diversity. The recent funding of a [new project](#) from WACREN, EIFL, and AJOL for the promotion of Diamond OA Publishing in Africa by the Wellcome Foundation is very promising.

Capacity: The capacity of libraries, librarians, and Academic Publishing Centres (APCs) be built to provide open access publishing and indexing support services in their institutions, leveraging open infrastructure platforms for books, journals, and articles. This will organically enhance the culture of library support for scholarly publishing services, provide evidence-based data for the operating framework, and model demonstrators to enable the seamless integration of a national open scholarly infrastructure.

Infrastructure: National open scholarly publishing infrastructure will provide better community-driven governance and infrastructure for coherence and sustainability. In addition, the development of data products and analytics services from a national infrastructure will be tailored to the local requirements of the researchers.

Education: Advocacy and sensitisation at universities on open science capacity is at the core of understanding open science. Consequently, education (using [OpenScience MOOC's](#)) and sensitisation of open science from the social value angle, especially for early career researchers and researchers in other disciplines outside STEM and MINT (Mathematics, Information (computer science), Natural Sciences, and Technology), that have been at the receiving end of funding biases, should be entrenched. There is a growing desperation to publish research for royalty among this group of researchers.

Promotion of publishing and research on indigenous knowledge: Using the national open scholarly infrastructure, indigenous scholarly publishing should be encouraged to foster cultural diversity, equality, and inclusivity and ensure that African knowledge is accessible to a broader audience.