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GUEST EDITORIAL

Fair and responsible research evaluation in India

The rapid expansion of the higher education sector in India and the increasing emphasis on its global competitiveness have placed growing importance on the assessment of the academic accomplishments of individuals and institutions. The historical peer judgement for assessing the quality of research output is now often replaced by quantitative metrics-based evaluation. Reliance on the Journal Impact Factor (JIF), number of research publications, and citation counts as proxies for assessing the research quality of individuals and institutions during the past few decades has promoted unethical acts under the pressure of 'publish or perish'. Favouring journal-based quantitative metrics across the entire academic lifecycle in India is adversely impacting faculty recruitment and promotions, doctoral evaluations, funding decisions, awards and recognitions. Quantitative parameter-dependent institutional rankings like Times Higher Education, QS World University Rankings, or India's National Institutional Ranking Framework (NIRF) have further compounded the negative impact.

The Government of India introduced the NIRF in 2016, with nearly 22% weightage on research output. This bibliometric indicator-based assessment, has unfortunately, incentivised institutions to publish more and more papers to secure higher ranking, because the prestigious tags like the institute of eminence (IoE) require the institution to be in the top 50 of NIRF, and to reach top 100 in global indexes like THE.

Metrics based evaluation promotes low quality research, stifles innovation, and discourages high-risk, long-term, and locally relevant studies, as these may result in fewer research outputs. Overemphasis on metrics further exacerbates inter-institutional structural inequities, as less-resourced institutional researchers may not fit into the mainstream disciplinary silos. Exclusive reliance on commercial databases also overlooks some good-quality journals from academic institutions in India during the assessment. Cumulatively, these are damaging India's academic system as reflected in multiple articles (e.g., Noorden R. V., *Nature*, 2023, **624**, 479-481; Joelving, F., *Science*, 2024, **386**, 1331-1332)

To capture the real academic and societal impacts of scholarly output, the San Francisco declaration on research assessment (DORA, https://sfdora.org/resource/practical-guide/) was developed. DORA and other similar subsequent movements (Hicks, *et al.*, 2015, **520**, 429–431; Moher, *et al.*, *PLoS Biol.*, 2020, **18**, e3000737) aim to counter the damage arising from using quantitative metrics as surrogates for the quality of an individual's or institution's research output. The compelling need for replacing the metrics-driven system with a responsible research assessment (RRA) framework prompted DORA to organise a panel discussion (details available at https://sfdora.org/2025/06/17/rra-in-india-2). A key insight emerging from this discussions was that the current research ecosystem in India turns the pursuit of knowledge from a joyful, curiosity-driven endeavour into a burdensome race to meet numerical targets. The discussion examined how the global RRA principles and tools can be contextualised and implemented within the Indian system to "ensure accurate representation of research quality and, ultimately, enhance the integrity and societal impact" of Indian research.

The deeply ingrained mindset that JIF and citation indices are reliable 'quality' indicators (Lakhotia, *PINSA*, 2018, **84**, 317-318) presents multiple systemic hurdles in evolving and following RRA modalities. Administrators and assessors find it much easier to rely on quantity parameters than on spending time and effort to assess quality. Despite limited research infrastructure and funding (a consequence of only about 0.6% of GDP being available for the purpose in the country), academics are compelled to publish a certain minimum number of research papers. Even experienced senior researchers serving on committees often use these metrics. This pressurises young researchers to follow, or they suffer a career disadvantage. The requirement to follow rules and regulations formulated by central bodies is another hurdle. Although widely appreciated and accepted, the Indian National Science Academy's (New Delhi) 2018 guidelines for assessing research outputs with emphasis on what is published rather than where published (Chaddah and Lakhotia, *PINSA*, 2018, **84**, 319-329) are hardly used.

Considering that the challenges in research assessment are not unique to India, we feel that the Indian community can collaborate with and learn from the leading international initiatives such as DORA, Coalition for Advancing Research Assessment (CoARA), and the CLACSO-FOLEC network in Latin America. For example, both DORA and CoARA (https://coara.eu/agreement/the-agreement-full-text/) emphasise qualitative judgments in conjunction with a responsible use of quantitative indi-

cators, explicitly abandoning inappropriate uses of JIF or other publications-based metrics. More than 900 CoARA-signatory research organisations agreed to broad consultations on common principles, commitments, and a timeline to elaborate and experiment with concrete changes, to share tools, and gather evidence. The European Commission's Horizon Europe and CoARA signatories aim to assess research proposals based on a diversity of research results from previous work, not just publications, and without JIF serving as a proxy for quality. A strong emphasis on training the assessors ensures transparency in assessments. CoARA signatories transparently develop and share their institution-level action plans for mass support and systemic reforms. Other RRA exemplars collated by DORA (https://sfdora.org/reformscape/) also provide useful guidance.

We feel that there is a comprehensive need for radical changes in the existing rules, guidelines, and processes, which largely depend on extensive use of journal-based metrics for evaluation. The first and foremost crucial step is to remove the JIF and other similar metrics from the grant application and other assessment forms. Some of our other recommendations include:

- Shift from quantity to quality-based assessment, with universities, colleges, and research institutions clearly defining what they are looking for while hiring or promoting. This shift should also involve a 'bottom-up' approach, with science academies, science-policy framing institutions, and younger researchers working together to formulate guidelines and inspire changes in the attitudes of assessors and regulatory agencies.
- Assessing through an expert in-depth review of a limited number of key research papers (e.g., 5-10 based on disciplines) with explanations about their importance; experience and quality of teaching should receive greater attention for teaching-focused roles, and demonstration of team effort for applied work for positions involving translational research.
- Assessment of research outputs with minimal reliance on commercial databases and consideration of research published in high-quality Indian journals, particularly those from the Academies and alternative scholarly communication platforms (e.g., Publish-review-curate model), irrespective of their being indexed in commercial databases. A much broader range of research outputs, e.g. datasets, software, null/negative studies, and activities such as peer reviewing, editorship, etc, need recognition. At the same time, the good Indian journals need proactive support with adequate public funds, and of established researchers through publication of some of their research output and through active involvement in the review process (Lakhotia, *Curr.Sci.,* 2018, **115**, 2187-2188).
- Discouraging culture of metrics by sensitising and empowering assessors not to succumb to the peer pressure for using journal metrics. Training of the assessment committee members to understand and apply RRA practices through broader discussions on research ethics and the true purpose of research (passion, not compulsion) is essential. Simultaneously, young researchers' fear that job opportunities will suffer if they do not conform to the current metrics-driven assessment norms needs alleviation.
- Increased and strategic funding: India's R&D spending must significantly increase beyond the existing ∼0.6% of GDP to support infrastructure development at higher education institutions (HEIs) liberally, provide incentives for quality research, and encourage both basic and meaningful applied research. Research support should steadily rise through the Anusandhan National Research Foundation (ANRF) and enhanced support from philanthropy and industry.
- Ensuring inter-agency alignments: alignment between different funding agencies, institutions, and policymakers is essential, so that academics do not face widely different assessment parameters practised by various organisations. Academic requirements and assessments at the central, state or private universities should be comparable.
- Incorporating substantial changes in NIRF and international ranking parameters: The purely quantitative parameters need appropriate modifications along with introduction of deterrent penalties on institutes and authors with compromised research integrity.

This journey towards RRA in India is undeniably challenging, but it is critically necessary for restoring and improving the image of its academic environment. Proactive appreciation and motivation for change, as well as discouraging the use of metrics, are essential for learning from successful global initiatives and implementing concrete, multi-pronged strategies. This approach is crucial for cultivating a research ecosystem in India, where quality, intrinsic impact, and true scholarly contributions are valued. Urgent transformation will ensure that not only does the research assessment in the country become responsible and fair, but India can also effectively contribute to the global momentum of RRA. Fair and responsible research assessment would ensure that Indian scholarship serves its highest purpose.

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