

# Editorial

## *Open access and research assessment systems, ¿invisibilizing quality vs. merchandizing quantity?*

To speak about open access in Latin America do involve the use of terms such as “open science” and also the analysis of new possible research assessment systems, opposed to the internationally and globally used, known as “mainstream” research assessment systems [Fernanda Beigel, 1]. A general overview of the path to open access and research assessment systems is described below, in the context of various documents from UNESCO, CLACSO, Carolina Foundation, ECLAC, among others; on the way of transformation and progress towards open science.

Open science should consider the human right to participate in research and benefit from it, to read and to publish [Dominique Babini, 2]. Therefore, defining open science is very complex, and to date; this concept has not yet been consolidated. From spaces such as UNESCO, ECLAC, ForoLAC 2018 [3] and various statements from Latin American communities, open science has been proposed as an inclusive science and open to the diversity of knowledge; where open access to data, software and assessments dominate, with open resources and incentives, backed by strengthened repositories and infrastructure; and referenced to a non-commercial open access transnational circuit or system [1].

Meanwhile, mainstream research circuit appear in the decade of the 50's of the twentieth century, when on pair with the end of World War II, a boom is given to scientific and technological activity. Scientific publishers in demand for prestigious scientific journals were consolidated; outsourcing and trading scientific production until today, led by the “impact factor”; created in the same decade, and evolved until our days (SCI, JCR, Scopus, etc.) [1]. Said system has acted as an oligopoly since then, using the impact factor as a quality criterion, which measures number of citations in a preset period of time, without regard of nature, field of work or contributions of the product. However, this criterion “erroneously” considered quality of scientific production, was completely consolidated in the previous decade (2000-2010), adding together to generate the university rankings, which gave rise to competition between universities in all continents [1], putting aside regional identity and its implications. Mainstream research assessment systems consolidated as the international and global judges of “true science”, totally opposite to what is built from Latin America as a peripheral, non-hierarchical, innate and local science [1].

On the other hand, Latin America gave the opening and the great contribution to the world, on the issue of open access and the open science. Our region, has privileged policies and procedures of the open access that are collaborative, public funded, with strong roles of universities and government science institutions, with noncommercial scientific policies, managed for common benefit. This way of implementation distinguishes us, and it is highlighted in various international meetings. This model role of noncommercial scientific policies and brokerage-free, generates tension with an international model, advancing in the privatization of production and scientific communication, which trades not only with the publication of mainstream scientific journal, but also with assessment indicators [2]. Since 20 years ago, these guidelines were consolidated by the early creation of scientific journal websites in the Latin American region, for the visibility in open access and benchmark for Latin American quality journals (SciELO, Latindex, Redalyc, AmelICA, Dialnet, REDIB) [2].

The scientific assessment in our region, however, has one complex problem, based on the fact that impact factor involves a type of quantification and generation of international ranking, where journals are measured; thus dominating the will and incentive of Latin American researchers to publish in journals outside their native region, since their metrics, wage rates and classification in their institutions, are in reference to mainstream research assessment systems, regarding the impact factor [1]. It is for this reason that the path from open access to open science faces challenges for its transition in Latin America, spanning from the risks of commercial open science (with APC and subscriptions), the need of relevant indicator for quality assessment and new incentives in open access, with the aim to stimulate and enhance science disclosure locally, regionally and nationally, reevaluating our national journals [1].

Hence, in this past year 2020 with the diverse and new world scenarios due to the Covid-19 pandemic, a strong and accelerated movement was elaborated, regarding research assessment, to include the open science processes in research assessment systems, as well as its review, aiming to a reform in responsible academic evaluation policies for integrity of research assessments, the redefinition of the concepts of excellence and quality of research, and finally, to rethink the

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need to move away from our globalized metrics dependence, to explore other ways of research assessment, expressed and signed in various declarations [Laura Rovelli, 2]. One of them, the San Francisco Declaration on Research Assessment (DORA), where the evaluation process is linked to the scientific and academic activity, and based on the development and transfer of knowledge, appraising contributions and additions as its relevance or intrinsic value for the progress of each field, and the transfer of knowledge as a two-way street. This past year 2020, brought open science and its need to the fore, demonstrated by the rapid progress in research and vaccine development, since exceptionally, the big publishers and repositories have opened their scientific production and have made it accessible, only in this pandemic scenario [José Antonio Sanahuja, 2]. There the need to advance in complementary metrics and assessment systems, to value open access research published in our countries [Laura Rovelli, 2].

Finally, the current discussions are focused on that “open science should be a growth factor for our entire region, including all research systems, big or small, all equally, inclusive and with equity for scientific progress from within, and ensuring that the benefit is for all; considering the knowledge and science, a human right” [Lidia Brito, 2]. From this clearly inclusive perspective, it is essential to apply policies and guidelines that bring us closer to the already established and globalized mainstream research assessment systems, so that a greater distancing and inequality of Latin American scientific production is not generated.

On this occasion, for volume 44, issue 1 (2021), a collection of seven scientific papers are presented, in the areas of chemical engineering (biomaterials and food), industrial engineering (general and quality management), civil engineering (construction materials and concrete technology) and computer science; with authors and co-authors from various institutional affiliations and nationalities: seven university institutions in Ecuador, two in Peru, Cuba and Venezuela, and one in Chile and Spain. Among them are: Universidad Laica Eloy Alfaro de Manabí (Ecuador), Universidad Técnica de Machala (Ecuador), Universidad Nacional de Educación (Ecuador), Universidad Nacional de Chimborazo (Ecuador), Universidad Yachay Tech (Ecuador), Universidad Técnica de Manabí (Ecuador), Universidad Nacional Toribio Rodríguez de Mendoza de Amazonas (Peru), Universidad Nacional Agraria La Molina (Peru), Universidad de Córdoba (Spain), Universidad de Valparaíso (Chile), Universidad Tecnológica de La Habana “José Antonio Echeverría” (Cuba), Universidad de Sancti Spiritus “José Martí Pérez” (Cuba), Universidad Simón Bolívar (Venezuela) and Universidad del Zulia (Venezuela). A new installment that demonstrates once again, the arduous and honorable work of authors, reviewers, scientific editors, and editorial committee; allowing the visibility of unpublished and quality scientific products. Thank you all, stay healthy and have a very happy and prosperous new year 2021.

**Professor Dra. Valentina Millano-González**  
**Editor-in-Chief**  
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**Facultad de Ingeniería**

[1] Ciencia abierta y sistemas de evaluación de la ciencia. Fernanda Beigel presidenta del Comité Asesor de la UNESCO para Ciencia Abierta. Ciclo de Webinars sobre Ciencia Abierta 2020 organizados por la Biblioteca de la CEPAL. <https://www.cepal.org/es/notas/ciencia-abierta-sistemas-evaluacion-la-ciencia>.

[2] Presentación del libro “Tendencias Recientes en las Políticas Científicas de Ciencia Abierta y Acceso Abierto en Iberoamérica”. CLASO y Fundación Carolina. Diciembre 2020. <https://www.claso.org/actividad/presentacion-del-libro-tendencias-recientes-en-las-politicas-cientificas-de-ciencia-abierta-y-acceso-abierto-en-iberoamerica/>.

[3] Declaración de Panamá 2018, Foro Ministerial para el Desarrollo en América Latina y el Caribe 10ª edición, FOLAC, undp.org/forolac, <https://www.cepal.org/es/comunicados/declaracion-panama-reafirma-compromiso-autoridades-la-region-reducir-desigualdades>.

[4] Declaración de San Francisco sobre la evaluación de la investigación DORA. Fundación Carolina. 2012. <http://dx.doi.org/10.14201/orl.17845>. <https://sfdora.org/read/read-the-declaration-espanol/>.