



Scholarly Communication and Open Access

Actions for a Public Policy in Latin America

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Contents

Abstract:.....	2
Introduction.....	3
Scientific Communication and Change of Model.....	3
Latin America: Our situation.....	5
Scholarly Communication System for Latin America: Principles and Actions	6
Principles.....	6
General Actions.....	7
Actions on Repositories.....	8
Actions on Consortiums	9
Actions on Journals	9
Conclusions.....	10

Abstract:

This document describes the current scholarly communication model and reinforces the need to take actions so that fully or partially publicly financed results are in Open Access, as well as the central role Science and Technology (S&T) organizations play to achieve this. Based on the regional reality, general principles and actions are proposed for Open Access repositories, consortiums, and journals to have a more systemic point of view from a public policy approach. The document concludes with the need to discuss initiatives such as "Plan S", specifying the points of agreement and disagreement, given the regional context, regarding topics such as Article Processing Charges (APC) or an assessment of the role of repositories.

The document was prepared for the Global Research Council meeting, in Sao Paulo, Brazil, in May 2019, for regional authorities of LA Referencia institution members.¹ It was subsequently published as a contribution to discuss and construct a joint vision that needs to be strengthened and updated in light of the challenges faced by Open Access in the short and medium term. We are grateful for the valuable contributions and comments made by the LA Referencia Directors.

¹ Side Event. Global Alignment of Open Access Initiatives. May 1, 2019. <http://fapesp.br/eventos/grc/program>

Scholarly Communication and Open Access Actions for a Public Policy in Latin America

Introduction

The circulation of scientific knowledge generates public policy concerns in science and technology. A change in the current model seems urgent given the lack of agreement between countries or universities and commercial publishers, the constant increase in subscription fees charges, slow process for publicly financed results to be in Open Access (OA) mode, and a call for balance between the commercial and non-commercial academic production in the developed world. In addition, a model benefiting metrics as the impact factor for assessment is criticized, while the consideration of Open Science is encouraged, in comparison to an excessive focus on articles as results.

This document introduces context elements and proposes actions to strengthen Open Access in Latin America. It takes advantage of "Plan S" and the Global Research Council meeting to provide a regional perspective.² This perspective, like any other, does not intend to be the only one: LA Referencia is a network mainly comprised of Science and Technology (S&T) organizations, created to promote a federated network of Open Access repositories offering technology and guidelines and facilitating joint agreements and public goods in this area.³

Scientific Communication and Change of Model

A document recently prepared by a Group of Experts gathered by the European Commission details the change in the scholarly

² <https://www.globalresearchcouncil.org/>
<https://www.coalition-s.org/>

³ LA Referencia's purpose is to support OA strategies in the region by offering a transferable technological platform with interoperability standards, to make the scientific production generated in higher education and scientific research institutions available. It also generates actions from the public goods approach for Open Science, specifically in scientific data. Policies for Open Science and Scientific Data in Latin America. LA Referencia, 2018. <http://doi.org/10.5281/zenodo.1292320>
Scientific documents are produced by the research institutions in the national nodes of the countries that comprise LA Referencia and its Board of Directors: Argentina (Mincyt), Brazil (Ibict), Chile (Conicyt), Colombia (Colciencias), Costa Rica (Conare), Ecuador (Senescyt), El Salvador (Vice Ministry of Science and Technology), Mexico (Conacyt), Peru (Concytec), and Uruguay (ANII). This process is based on technical and organizational agreements between public S&T organizations in the member countries and RedCLARA. In some countries, the nodes are operated and maintained by universities or networks (for example, CBUES in El Salvador and CEDIA in Ecuador).

communication model.⁴ The document mentions an increasing role of commercial publishers, the use of the Journal Impact Factor as an element for competition, and increased subscription fees affecting the budget of S&T organizations. On the other hand, digitization facilitated the supply of journal bundling (known as "big deals") and opened OA opportunities.

In addition, the commercial publishing industry presents a dynamic that leans towards oligopoly with high economies of scale and scope. Information asymmetry is verified in the negotiations, and some companies had profit margins higher than other industries.⁵

A counterpoint is the mission of research institutions to disseminate information as widely as possible and of S&T organizations to have fully or partially publicly financed results available in OA.

This last process was explicitly supported by governments and institutions. Examples include the Berlin and Budapest declarations. Other examples are the Horizon 2020 program by the European Commission and federally funded R&D plans in the United States.⁶ Numerous funders in the world also have policies based on repositories.⁷ In Latin America, countries like Argentina, Peru, and Mexico have legislation in place.

In September 2018, with the support of the European Community, eleven research funders in Europe launched Plan S. This initiative proposes that, by 2020, scientific articles that result from research funded by public grants must be published in compliant with Open Access journals or platforms. Among other aspects, the Plan includes the financing of Article Processing Charges (APC) to publish in OA journals, as well as

⁴ Future of Scholarly Publishing and Scholarly Communication: Report of the Expert Group to the European Commission. Directorate-General for Research and Innovation, European Commission. January 2019.

<https://publications.europa.eu/en/publication-detail/-/publication/464477b3-2559-11e9-8d04-01aa75ed71a1>

⁵ Larivière V. Haustein S. and Mongeon P. (2015). The Oligopoly of Academic Publishers in the Digital Era, PLOS ONE, 10(6); DOI: <https://doi.org/10.1371/journal.pone.0127502>

For information on profits, see the following article: Buranyi, S. (27 June 2017) "Is the staggeringly profitable business of scientific publishing bad for science?" The Guardian.

<https://www.theguardian.com/science/2017/jun/27/profitable-business-scientific-publishing-bad-for-science>

⁶ Horizon2020, Manual. Open access & Data management. European Commission.

http://ec.europa.eu/research/participants/docs/h2020-funding-guide/cross-cutting-issues/open-access-dissemination_en.htm

ODST (2013). Expanding Public Access to the Results of Federally Funded Research.

<http://www.whitehouse.gov/blog/2013/02/22/expanding-public-access-results-federally-funded-research>

⁷ Science Europe, (2016). Open Access Publishing Policies in Science Europe Member Organisations. Key Results from Science Europe and Global Research Council Surveys. http://www.scienceeurope.org/wp-content/uploads/2016/10/SE_OpenAccess_SurveyReport.pdf

the establishment of maximum APCs and recommends that the copyright is left with the author using a CC BY license to ensure the article's maximum re-use.

The presentation of this Plan has generated an intense debate and, although it has relevant elements that must be decisively supported, it includes elements that require more time to know their scope or that are not advisable for Latin America in the short term. This is also due to the model and characteristics that have been developed in this region, which are described below.

Latin America: Our situation

- Latin America has a strong OA tradition. There is a number of collaborative and non-commercial initiatives, with government support and a prominent role of universities in the maintenance of free journals for readers and authors. SciELO, Latindex, CLACSO, and REDALYC are just some outstanding examples of networks that strengthen journals.
- Latin American journals, for the most part, do not charge APC. The tradition of university repositories and the existence of harvesting national pioneer nodes play a relevant role. This last factor explains the positioning of the region in international directories.
- Unlike what happens in Europe or the United States, an important part of the public agencies controls several aspects of the value chain (promotion and OA policies in each country, R&D financing, OA infrastructure and services, purchases of services from commercial publishers, assessment and indicators, among others).
- Although there is progress, there is also an asymmetry of resources among the countries. Consequently, appropriate approximations must be made to diverse contexts, and cooperation must be strengthened.
- In addition, research is funded mainly with public resources, which is why it is imperative that results be open and accessible.

Scholarly Communication System for Latin America: Principles and Actions

The answer mostly lies in the S&T organizations that define policies and funding. As indicated in the document by the EC Group of Experts:

"In alliance with research institutions and their libraries, and researchers (in particular with the help of learned societies), funders can reform the general landscape of scholarly publishing and communication, and bring a better balance between the public and private sectors in the ecosystem of scholarly publishing".⁸

Under this possibility, the following **general principles are proposed** for Latin America:

Principles

- Focus the policy on the principle that all totally or partially publicly financed results must be in OA.
- Preserve and strengthen a collaborative, sustainable, non-commercial scholarly communication system with public support.
- Consolidate a regional model internationally linked regarding access to results and research production at the regional and global levels. These two approaches must be preserved and balanced for the development of our countries.
- Promote the transition to an Open Science scenario in the OA policies definition and the communication model.
- Prioritize free interoperable open source software, ideally transferable with open standards preventing lock-in practices.
- Share progress and strengthen regional collaboration among Latin American countries to mitigate asymmetries in the distribution of resources.
- Promote a work model using a federated network approach in order to have general agreements at the regional level and national nodes that implement the policy in their institutions according to their context (country node).

⁸ Ibid. Future of Scholarly Publishing and Scholarly Communication: Report of the Expert Group to the European Commission. (pp.10).

General Actions

- Include this issue in meetings of Latin American political authorities to align the countries with a common position regarding Plan S or other plans, and design a route that will make efforts to ensure OA in the region sustainable.
- Promote policies and licenses so that results are widely disseminated through licenses such as *Creative Commons* for publicly funded results. Both CC BY (liberal use) and CC BY NC SA (non-commercial use) are appropriate. In addition, CC0 can be for data. The specific decision will depend on the researcher or the institution.⁹
- Promote national OA policies, legislations or regulations from S&T organizations to incorporate this change into the model and implement repositories in each country to deposit results.
- Evaluate the progress of Plan S negotiations and agreements in Europe in the transition to OA and use of APC, and prepare a cost-benefit analysis before taking any actions. In fact, Latin America, in relation to several CTI funders, does not have the resources to make the OA transition through the APC mechanism by the year 2020 (date and goal proposed by Plan S), while still paying subscriptions. This aspect was also revealed earlier in the First Consortium Assembly from Ibero-America and the Caribbean held in Mexico in 2017.¹⁰
- Continue to promote and give adequate funding to national and regional OA platforms. If the collaborative non-commercial model is to be maintained, adequate financing is required. This is, at the end of the day, one of Latin America's great contributions to the change of the model.
- Strengthen the regional capacity in the technological area and participate in other countries' advances since disruptive services and platforms can be produced that may accelerate the transition to open access.

⁹ See CC types at: <https://creativecommons.org/licenses/?lang=es>

¹⁰ See <http://reuniondeconsorcios.conicyt.mx/index.php/primera-reunion/declaraciones/>

Actions on Repositories

- Promote the benefits of having repositories as alternatives to identify, manage, give access, visibilize and preserve scientific and technological production.
- Favor a distributed interoperable model with local, national, regional, and global aggregators, where each layer offers value added services. In this context, the Confederation of Open Access Repositories (COAR) approach is appropriate with Next Generation Repositories to support scholarly communication.¹¹
- Strengthen, in this vision, the role of repositories in the communication and scientific information management ecosystem. Repositories are not only the place to deposit and preserve results, but infrastructures for the generation of new products.
- Support progress, based on common actions among the regions, to expand the scope of the repositories developed in each country. LA Referencia collaborates with OpenAIRE (the European platform) and COAR aligning common guidelines (metadata) and new services in the framework of the Horizon 2020 project.¹² This relationship must be supported and strengthened in order to increase effectiveness and offer value-added services such as common and distributed statistics, notification systems ("brokers"), and alternatives for the use of scientific data repositories such as Zenodo (operated by CERN).¹³
- Follow up on the progress of Plan S regarding technical requirements or recommendations necessary for platforms. Plan S points out some requirements that will need relevant technological advancement to take advantage and put them into practice in Latin America.
- Develop technical capabilities in the countries in the region in terms of new technologies and information management to support the repositories, consequently

¹¹ <https://www.coar-repositories.org/activities/advocacy-leadership/working-group-next-generation-repositories/>

¹² OpenAIRE-Advance receives funding from the European Union's Horizon 2020 Research and Innovation programme under Grant Agreement No. 777541.

¹³ www.openaire.eu

<http://www.lareferencia.info/es/blog-masonry/noticias/item/208-potenciando-la-ciencia-abierta-openaire-inicia-nuevo-proyecto>

<http://www.lareferencia.info/es/servicios/proyecto-openaire>

<http://www.lareferencia.info/es/blog-masonry/noticias/item/218-la-referencia-and-cern-enter-into-agreement-to-promote-and-expand-open-science-in-latin-america>

generating local and regional communities in these matters.

Actions on Consortiums

- Have a better balance between funding of resources purchased from commercial companies and the public resources destined to strengthen the national systems and platforms.
- Generate negotiation capability to change bundling purchase policies ("*big deal*") and advance to subscribe what is necessary. Transfer these potential savings to strengthen national capacities and open access of results or to increase public access.
- Support the initial efforts of the consortiums in the region to exchange information and improve practices on various topics already identified (prices, uses, clauses, among others). Increase transparency by publishing publicly financed procurement contracts. This effort must be linked to the progress of countries with more experience in this area.
- Explore and evaluate more effective and economical alternatives to access publicly financed articles rather than paying APC. For instance, have versions of accepted manuscripts that had been publicly financed.

Actions on Journals

- Maintain funding and support from universities and research institutions in Latin America for publications to be in Open Access and free for both readers and authors.
- Support local journals to improve their quality and visibility based on public funding mechanisms in each country.
- Promote and support distributed, interoperable, Open Access technological infrastructures that generate economies of scale at the regional level in connection with international advances.
- Promote cultural change, technological recommendations and incentives so the scientific data supporting the publications are also public with appropriate licenses.
- Establish technological alternatives that facilitate the deposit of articles in OA repositories, as well as CC licenses and explicit policies favoring this mechanism.

- Regarding the journal and commercial publishers market, demands have been explicitly stated by many actors in many forums: transparency in costs, embargoes not exceeding 6 or 12 months depending on the area; technological advances to comply with mandates and legislations (for example: for deposit in repositories when results have been totally or partially publicly financed); possibility to reuse the results and generate new knowledge and services.

In general (applicable to all actors involved), do not overuse the impact factor as an assessment element. It has a precise use and should not replace qualitative and quantitative evaluation mechanisms to measure the quality of production.

In addition, in order to implement these proposals, a significant amount of effort is required to have monitoring systems and indicators that account for progress and difficulties. There is also a need for greater coordination and exchange of experiences and best practices with organizations in other regions that have taken steps to avoid duplicating efforts in some of these dimensions.

Conclusions

Plan S is a sign that the system requires a change of model or a better balance between the commercial and non-commercial worlds in scholarly communication. And it is unanimously agreed. Even the document by the Group of Experts mentioned before gives precise and pertinent recommendations to researchers, funders, publishers, and universities to change to a new model.

Latin America must discuss this initiative since all countries share many principles and objectives. The specific issue where differences are found is the APC payment. Differences are due to four reasons: costs involved, current model of Latin American journals, option to develop policies for Open Access repositories, and assessment of results based on whether greater competition and innovation is produced in the model. Finally, many actors have pointed out that the proposal contained in Plan S should also assess the role of repositories

as a viable and free alternative to promote OA and meet the organizations' regulations.¹⁴

The discussion of these recommendations among the LA Referencia member countries should help build a common vision of a phenomenon that is fundamental to the development of STI systems.

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¹⁴ For example, see Portugal and FCT'S position towards Plan S.

https://www.fct.pt/noticias/?id=372&/2018/10/Portugal_and_FCT

See Harvard and MIT libraries reply to the implementation guidelines. "We'd like to see Plan S make better use of the global network of open-access repositories. We'd like to see Plan S reinforce and expand – rather than neglect or unintentionally hinder – the power of open-access repositories to democratize access to science and scholarship" Spotlight: Harvard Library and MIT Libraries provide recommendations for Plan S implementation, January 18, 2019.

<https://libraries.mit.edu/scholarly/2019/spotlight-harvard-library-and-mit-libraries-provide-recommendations-for-plan-s-implementation/>