



Ligue des Bibliothèques Européennes de Recherche
Association of European Research Libraries

UNESCO

Attn: Director General, UNESCO

The Hague, 23 December 2020

RE: UNESCO Recommendations on Open Science

To the Director General,

We at LIBER, the European Association of Research Libraries, want to express our gratitude for the quality of the draft UNESCO 'Recommendation on Open Science', its clarity, and comprehensiveness.

The purpose of this letter is to comment on the balance of information presented in the draft and to enrich the draft with further inclusion of library-related topics which we (and our network) deem crucial.

At present, we believe that scientific communities are at differing levels of maturity when it comes to Open Science. Success or failure at a global level is tightly connected to the capacity to engage communities with these differing needs and sensibilities. *

Disciplinary driven, Open Science policies are as important as national frameworks and LIBER believes we need both to be successful. However, we importantly need to consider the specifics of Open Science within each field, as well as the related academic culture, customs, methods and ways of conducting research.

Wider Scope & Level-Oriented

Firstly, LIBER believes that the UNESCO vision on Open Science is mostly centred at the national level. However, an efficient Open Science policy must take into consideration 5 main levels: *global* (positions taken by international organisations, etc.), *continental* when relevant (European policy, for instance), *national* (national strategy including support measures), *local* (institutional and company policies), and *individual* (awareness-raising, incentives, recognition, careers etc.).



Hence, the recommendations should insist on the importance of the local level when it comes to liaising between the national level and the researchers themselves (which is, in fact, the role of universities within the context of academic freedom).

The draft should also insist on the importance of the continental level. Europe is a success story when it comes to different countries coming together to support Open Science more efficiently (See Horizon 2020, Horizon Europe now). Other continents may very well benefit from the European experience and vice versa, especially when it comes to expensive infrastructures that cannot be sustained at a national level.

Opening up science no doubt requires a strong connection between these various levels, and we would like to see this further elaborated upon within the draft.

Increased Focus on Open Access

Next, we urge UNESCO to dedicate more space in the recommendation to Open Access; this is a subject that still very much needs to be addressed and worked towards.

In many countries, the opening up of publications is an ongoing process that we feel still needs to be secured.

For instance, though France is a developed country with a strong national policy, the country has only around 50% of its publications available as Open Access (as of the end of 2020).

Increased Promotion of Open Access Initiatives

Additionally, when it comes to the publication landscape, many diverse and interesting initiatives are currently underway. Such initiatives need to be advertised and sustained.

Examples of initiatives include freemium (OpenEdition for instance), “subscribe to open”, publicly funded initiatives (for example, SciELO in Latin America, Open Research Europe (ORE) platform at a European level which offers free access to publications funded by European grants, HRCRAK in Croatia etc.) as well as crowdfunding (see the Knowledge Unlatched initiative) etc. Also, Coalition S is currently exploring collaborative non-commercial publishing models for Open



Access – commonly referred to as the Diamond Open Access model¹.

All these abovementioned initiatives should be more largely communicated, advertised, and supported, and we hope that mention of this can be made within the draft.

On top of that, the concept of bibliodiversity², which is a crucial component of Open Science, is mentioned in the text, but in a way that demonstrates that the notion is not clearly understood. As such, we believe a definition of bibliodiversity should be proposed in the recommendation.

Open Education and Training Ecosystems

To succeed, we as LIBER believe that a full, robust, and ongoing training ecosystem is needed to support Open Science.

The UNESCO recommendation should clearly state that there is a need for a seamless, comprehensive, continuous, and intensive training policy to engage all stakeholders, including researchers and support staff, providing both general and technical awareness and related skills.

Such training should go beyond basic awareness-raising activities for researchers. Actual support services with trained and dedicated staff can provide help when it comes to the deposit and full-text dissemination of research outputs. Assistance can also be provided when it comes to the development/implementation of data management plans as well as in the opening up of data that can be disseminated, participation in the dissemination of content to the non-academic world, etc. Thus, we believe a comprehensive policy for training and support on the abovementioned points is necessary.

Open Education Resources are mentioned just once, but no further reference to the UNESCO recommendation on open education has been made. Open education is more than just the resources, it also means educating young researchers to adapt to Open Science, it means interaction between teaching and learning, etc.

¹ <https://www.coalition-s.org/exploring-collaborative-non-commercial-publishing-models-for-open-access-tender-results/>

² <https://www.ouvrirlascience.fr/wp-content/uploads/2019/02/Jussieu-Call-for-Open-science-and-bibliodiversity.pdf>



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Role of libraries to support a Global Open Science Policy

Libraries can be found almost everywhere in the world, in the academic world and beyond, and university and research libraries are wide-spread, and have structured, built, and sustained Open Science services over a long period of time. As such, we believe the UNESCO recommendation should therefore encourage any initiatives putting libraries in a key position to support an effective Open Science policy. Libraries are indeed powerful enablers as well as central infrastructures to achieve a global policy regarding Open Science on a worldwide scale and this needs to be clear within the draft.

Open by default, closed only when necessary

LIBER's own strategy strongly states that scientific publications must be open by default. Open Access must be the predominant form of publishing in the coming years. Therefore, the recommendation as part of paragraph 10 should therefore be a lot clearer. Moreover, the issues regarding data and scientific publications are two separate points and should be treated as such. The former can be retained in the current wording but the latter, issues regarding scientific publications, needs to be improved to mention that such publications should be open by default.

Copyright Exceptions

Added to that, it is necessary to introduce, advertise and sustain the need of mandatory copyright exceptions within the UNESCO recommendation, such as the ones introduced in Europe by the Europe Commission regarding text and data mining, teaching activities, and preservation of cultural heritage. These are powerful enablers of Open Science.

Verifiability

In response to paragraph 16, we feel that the notion of verifiability is of course relevant, but not enough. Researchers need to be able not only to check facts, figures and methodologies, but also to be able to reproduce the scientific processes at stake, using, for instance, the same method with different data or more complete ones, or using the same data with a different method so that they can build on top of previous research conducted.

This would also naturally reinforce trust in science and scientists from outside



the research community i.e., among citizens. There is, therefore, a need to introduce in the text the notion of reproducibility, to define it, and to connect it with verifiability, but to also explicitly address the themes of trust, research integrity, and scientific deontology.

Open Science Infrastructures

Overall, we believe that issues regarding the infrastructures to support Open Science are well developed in the draft. Some extra comments are nevertheless required. Apart from the biggest and more robust infrastructures, there is a risk that some more fragile ones would be weakened, not to say abandoned over the long term.

There is, therefore, an urgent need to define, develop, and support a globally sustainable ecosystem, sustaining a network (versus over-concentration) of initiatives and infrastructures that need to be open and managed by and for the research community, with appropriate means, both financial (monetary) and human (staff).

Inclusion of Persistent identifiers (PIDs) and registries, role of Creative Common Licenses.

It is important to include the role of Persistent identifiers (PIDs) as well as interoperable registries, which are both key to achieving Open Science. They are indeed essential to let the different infrastructures communicate one with another, allowing citations, reuse, sharing, discovering, linking publications and data, and enabling the development of new services on top of the existing ones. It is also important that UNESCO recalls the importance of metadata, provision as well as curation over the long term: rich and qualitative metadata are central to manage the whole Open Science ecosystem.

Creative Common Licenses are mentioned in the draft, as a key initiative to allow re-distribution and re-use of licensed works. However, we urge UNESCO to include detailed points on this matter.

Support of San Francisco Declaration on Research Assessment (DORA)

The UNESCO recommendation should insist on the urgent need to change the evaluation system of research, including both research and individual career assessment. Consequently, the San Francisco Declaration on Research



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Assessment (DORA) should be supported as a key initiative in the recommendation.

Innovations regarding evaluation should be presented and supported as good practices, such as open peer-reviewing, new metrics, impact on citizen science and civil society, qualitative issues (versus sole quantitative ones), the publication of data papers, promotion of negative research results and so on.

Cease Commercial Infrastructures

Commercial infrastructures are mentioned as a barrier within the draft. However, how to put a stop to this development is not something that is addressed. For this reason, we urge UNESCO to include detailed points on this matter.

In close, there is a long-term need to measure the effective implementation of Open Science. The UNESCO recommendation should therefore propose the creation of a set of indicators/standardisation at a global level, including a limited number of figures that would be global enough to let each country be able to fill them in at a national level, and UNESCO to concatenate, promote, and advertise them at a global level.

We appreciate you taking the time to read our above letter and we hope that the abovementioned points will be considered for inclusion in the final recommendation.

Yours sincerely,

On behalf of the LIBER Executive Board

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