

Implementing UNESCO's Recommendation on Open Science: A Focus on Open Infrastructure

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This paper addresses the development of a case study that implements UNESCO's Recommendations for Open Science, with a particular focus on open infrastructure across the regional hubs of the Knowledge for Change (K4C) Consortium for Training in Community Based Participatory Research, co-founded by Dr. Budd Hall (University of Victoria, Canada) and Dr. Rajesh Tandon (PRIA, India), UNESCO Chairs in Community-Based Research and Social Responsibility in Higher Education. A key mission of the K4C Consortium is to develop research capacities for the co-creation of knowledge through collective action by practitioners, community-based researchers, community groups, and academics (Knowledge for Change 2020). This goal aligns with UNESCO definition of open science as the principles and practices that make research from all fields accessible and useful to society, where open science is broadly defined as encompassing the sciences but also the fields of humanities and social sciences (UNESCO 2022). This includes tiered access to knowledge—as appropriate—as well as ensuring that the production of knowledge follows open standards that are “inclusive, equitable, and sustainable” (UNESCO 2, 2022). The goal of the K4C consortium also aligns with UNESCO's emphasis in knowledge diversity, encompassing disciplinary but also community-based knowledge and forms of knowledge production, such as indigenous knowledges, multilingual and multimodal knowledge, as well as foregrounding knowledge from marginalized voices. K4C's diverse regional hubs collaborate with research communities that are historically excluded from mainstream academic knowledge production systems. Through regional consultations, the K4C Consortium provided key recommendations on Open Science, providing case studies to UNESCO on the need to support of community-led open infrastructure (Chan et al. 2020)

UNESCO provides valuable but broad recommendations. The main goal of the consortium is to identify and overcome challenges in implementing open knowledge infrastructure, as suggested by UNESCO. Specifically, the pilot project described here aims to serve as a platform for nurturing open infrastructure concepts and practices. We invite collaboration from the K4C Consortium to collectively develop practical strategies for adopting and customizing open infrastructure, free from corporate influences. The K4C Open Knowledge Network is intended to serve as a model for other community-led projects. This is because it involves globally distributed regional hubs that lack a unified digital infrastructure. Our focus is on understanding how the K4C conducts research, determining its technical infrastructure needs, and ensuring that the infrastructure accommodates differences among regional hubs while fostering community cohesion. Some of these differences and challenges may include the use of multiple languages and varying project goals and timelines, among others. The pilot has three primary objectives: i) implementing UNESCO's open science recommendations, with an emphasis on community-led open infrastructure; ii) assisting open knowledge projects in adopting

community-led infrastructure; and iii) creating a use case to advocate for further infrastructure development and support.

To conduct this pilot study, we are utilizing Humanities Commons as our common open infrastructure due to its community-based nature. The initial step involves each knowledge hub establishing a regional presence on Humanities Commons, with currently over 20 regional hubs worldwide. Subsequently, groups contribute their research and practices to a shared repository, enabling further development and providing access to others. The shared repository aims to curate ideas, mentorship of community and early-stage researchers, highlighting commonalities and differences among the work and needs of regional hubs. A challenge in this area includes addressing translation needs for diverse regional hubs to understand documents and collaborate effectively. Another key aspect of this open infrastructure is the provision of mentorship, specifically involving senior project participants mentoring juniors to support their work. As contributions mature within the open infrastructure, the fourth step involves relying on version tracking and editorial processes for the preparation of publishable output. The final stage is to publish the work in open-access, vetted outputs such as reports, journals, volumes, and other forms of dissemination.

Currently in the planning stage, the project aims to launch with at least five initial K4C regional hubs. This launch will serve to implement the workflow, learn about the required human, resource, infrastructural, and sustainability support, and provide insights for incorporating all remaining regional hubs. Ultimately, the pilot implementation seeks to support the key mission of the K4C Consortium and help other hubs adopt open infrastructure that aligns with UNESCO's Open Science Recommendations.

Works Cited

Chan, Leslie, Budd Hall, Florence Piron, Rajesh Tandon, and Wanósts'a7 Lorna Williams. "Open Science Beyond Open Access: For and with Communities, A Step Towards the Decolonization of Knowledge". Zenodo, July 15, 2020. <https://doi.org/10.5281/zenodo.3946773>.

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