

Open Science as an instrument for the democratization of knowledge

The 8th Luso-Brazilian Open Access Conference (CONFOA), scheduled for October 4 to 6, 2017, at the premises of the Oswaldo Cruz Foundation, in Rio de Janeiro, is themed “From Open Access to Open Science,” signaling the broadening of the discussion on the theme that gave rise to this important annual meeting, which has been being held since 2010.

Initially driven by the movement towards open access in response to the high prices charged by the publishers of scientific journals, open science can today be understood as a ‘movement of movements.’ New fronts, such as open scientific data, open scientific tools (software and hardware), open laboratory books, open education, and citizen science open up under this. More than an ‘umbrella’ term, open science advances towards integrating these various fronts, broadening the issue of access to scientific information to also focus on new forms of producing, circulating, and promoting the social appropriation of information and knowledge in science, technology, and innovation.

The present planetary crisis, in its various dimensions, still imposes new agendas on open science. The urgency and complexity in confronting it show a crisis of solutions, pointing to the need for new ways of approaching problems, new knowledge bases, and other ways of producing science and innovating. It is also a crisis of representation: More sustainable routes to development imply radically democratic processes in their multiple possibilities and meanings, as well as in the scientific-technological paths to be adopted.

In this context, the movement for open science has a double meaning. On the one hand, it is about increasing visibility, access, and speed in scientific knowledge production and circulation. On the other, it has to do with increasing the social base of science, affording it greater porosity in its relation to and interlocution with other types of knowledge and cognitive agents. In short, a pragmatic perspective limited to openness in the strict scientific field and in a new kind of productivism in science does not suffice; there is a need for a democratic perspective that recognizes and converses with other actors and spaces of knowledge.

Thus, open science holds important interfaces with the fields of education and work. In the present scenario, the work has an increasingly communicative, relational, and linguistic nature, one which requires knowing how to read information as a raw material and a work tool, as well as capacity for continuous learning, creativity, and innovation. In this context, open educational resources (OER) – teaching, learning, and research materials (books, lesson plans, software, games, school work, videos, audios, pictures) are kept in the public domain or have open licenses, including open online courses –

are an important part of the open science movement, but do not exhaust that relationship. What is strategic is open science's contribution to training for citizenship, to the coproduction of knowledge and solutions, to intervention in issues involving increasingly more technical and scientific content. It is a question of training young people and adults who recognize and critically discuss the values of open science, who train to develop practices and tools that contribute to innovative solutions to contemporary problems. It is also a matter of critically rethinking the role of the school in its relation with the multiplicity of other times and spaces (formal and non-formal) of education, socialization, and production of knowledge; of promoting and disseminating sharing and coproduction cultures and tools among educators and students; of recognizing and giving visibility to other subjects and practices of knowledge and education; of giving way to different discursive systems, taking advantage of what the new technical means have to offer. It is necessary to consider the varied spectrum of languages, their technologies and specific modes of knowledge, enabling the appropriation and potentialization of the possibilities of the various information and communication ecosystems and their technical devices. It is also important to contribute to the development of critical skills for the appropriation and use of the information and associated technologies in relation to the new systems of surveillance, control, traceability, exposure, and commercial and political uses that constitute themselves in this.

It is, therefore, a broad agenda that requires a deepening of the various dimensions and issues involved, in which the next CONFOA will surely have a role to play.

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Literature

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