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Reimagining science communication in the age of AI

Reviewed by **Lourdes López-Pérez**

Abstract This review analyses the presentation of *Campus Gutenberg Museo de la Ciencia CosmoCaixa 2023* held in September 2023 in Barcelona and reflects on the connection of the event with the necessary redefinition of the social communication of science in the face of the impact of artificial intelligence.

One morning, you wake up, and Alexa is no longer by your side. That day, no one turns on the bedroom light at 5%, congratulates you for achieving training challenges or warns you that the coffee is ready. At that moment, you realise that artificial intelligence (AI) has changed your life.

The influence of this emerging technology is doubly manifested in disciplines such as science communication: it determines the development of professional practice itself and transforms the channels and means of knowledge dissemination. *Campus Gutenberg Museo de la Ciencia CosmoCaixa 2023* has anticipated the necessary reflection on this new reality in its 13th edition. AI was the focus of attention at this meeting, looking at its future from a triangular perspective: training, research and practice.

Conferences, like books, leave their mark on you through the sensations you experience while you enjoy them. I will remember this conference as a comfortable and open space that enhanced participation and dialogue between researchers, professionals, educators, social agents and students.

Four plenary lectures, 17 parallel sessions, 44 exhibitions and eight open workshops made up a programme that addressed vital issues relevant to science

communication: inclusion, equality, public participation in science or misinformation.

Artificial intelligence and ethics

The opening lecture set the social tone of the meeting with a presentation on 'Responsible Artificial Intelligence'. The AI expert and professor at the University of Umea, Virginia Dignum, spoke about the human dimension of technology and linked it with the need to promote quality and inclusive education to inform citizens about its impact on their daily lives and personal development. Similar observations were already pointed out by authors such as Holmes, Persson, Chounta, Wasson and Dimitrova [2022], as well as Miao, Holmes, Huang and Zhang [2021].

Ethics was a guiding thread of the conversations held by science communication thought leaders in Spain: Pilar Sánchez, Miquel Pelliécer, Karla Islas, Ramón López de Mántaras and Vladimir de Semir on artificial intelligence in scientific communication. The responsibility of journalism regarding the image projected by this technology was the focus of the debate. They highlighted the importance of continuously training media professionals and their social responsibility to avoid sensationalist stories that generate false expectations. They also emphasised the communication areas in which AI will have the most significant impact: content production, data analysis, news detection, personalisation of information, the fight against disinformation and data visualisation. Many of these issues are already the subjects of study in the published scientific literature [Parratt-Fernández, Mayoral-Sánchez & Mera-Fernández, 2021].

Participation and dialogue were, once again, the protagonists at the Gutenberg Campus with the organisation of an open debate for the development of a proposed guide to good practices in the use of AI in science communication. The result is sure to be of interest to the practical and scientific community.

The science of science communication

I especially enjoyed the open workshop dedicated to the science of science communication. Through a participatory methodology, three researchers leading this work [Revuelta, Llorente & Saladié, 2023] presented the results of the study. They promoted dialogue to share knowledge and experiences around research, training and practice.

The barriers and challenges for the incorporation of professionals are another of the main topics. Not only was it the focus of debate in one of the plenary conferences through the voices of researchers and practitioners in science communication Ángela Monasor, Rubén Permuy, Nuria Saladié, Jordi Más and Concepción Sanz, but it was also present in the informal conversations.

A roundtable on training and incentives for the scientific community to communicate was the finishing touch to the conference. It left us hopeful that dissemination will be more than just a hobby for Spanish researchers who wish to share their knowledge. The new Law of Science in Spain recognises this work in its article 15 [Ley 17/2022, 2022].

Practice and research

It was encouraging that a science communication meeting dedicated space to science communication research, but very little time was dedicated to the dissemination of results that support evidence-based practice and an opportunity was missed to bring researchers and science communication practitioners together in a meaningful and enriching conversation This reminds me of the "persistent irony" to which Scheufele [2022] alludes in this field, regarding the absence of dialogue between researchers and professionals.

As described by several authors [Metcalfe, 2022; Gerber et al., 2020; Bucchi & Trench, 2021; Davies et al., 2021], there is a worrying disconnect between theory and practice; that is, between the people who research science communication and those who are professionally engaged in it.

With the impact of AI on communication, now is the time for academics in the field to listen to science communicators and the social sectors involved to adapt their study priorities to the challenges demanded by today's society. Likewise, practice must be supported by evidence that favours effective and inclusive knowledge dissemination and public dialogue.

For now, I remain encouraged about the development and future of this young profession in Spain that is currently consolidating and occupying a relevant place in society. Many of the delegates were young people who had chosen this career as a dedication to the future. Those of us fortunate enough to dedicate ourselves to this work have the ethical and moral obligation to work together to guarantee the right to information and quality education and thus favour the generation of a freer and happier society.

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