Moving the Conversation
From Access to Evaluation

IFLA Health And Biosciences Section Satellite Meeting 2022

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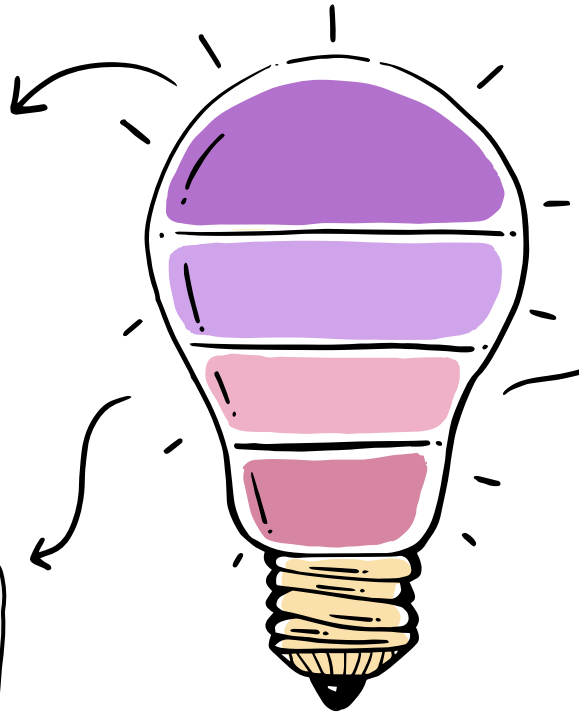
What's changed in Open Science & the World?



2

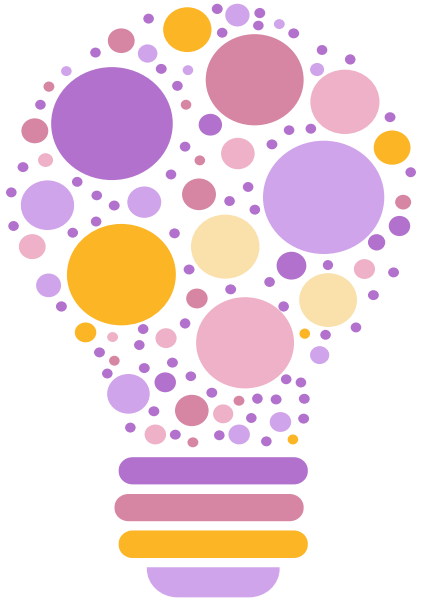
What does this mean for how we trust & evaluate research?

3

What are the "new" information literacies needed to navigate Open?

Open Science & the World – What's Changed?

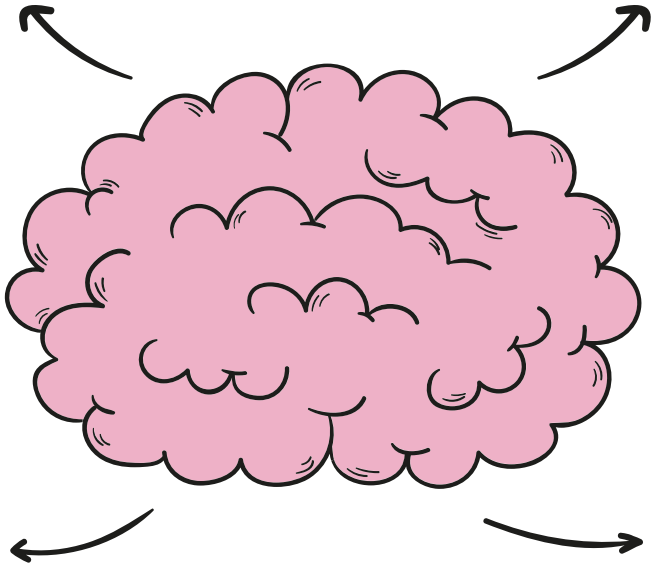
The World	Urgent global challenges: Covid-19, climate change, SDGs
Plan S	Funders driving Open Access
Preprints	Early & faster sharing of research
Society	Increased public interest in Science
Trust	High profile retractions – trust in the scholarly record?
DORA	Shift away from evaluating research based on publication venue



Implications

The reducing role of publisher as “gatekeeper”

Wider dissemination of non peer-reviewed research



New users of & uses for Science beyond the academy

Our proxies for quality & trust are changing

Turning Challenges into Opportunities

1. Do we over-rely on peer review, a system that is becoming unsustainable as we continue to publish more & more?

2. Is there now a new opportunity for truly empowering our citizens through fostering broader digital and critical literacies?

3. How can we best leverage the benefits of openness to drive and enable research integrity and validation?

4. How do we rethink and co-create a fairer publishing ecosystem that rewards and promotes the “right” things rather than “publish or perish”?

New Enablers of Trust

With new channels & forms of dissemination where do we place our trust instead of in the “high impact”, gate-keepered, peer-reviewed article?

Openness & Transparency

Responsible & Trustworthy Science Communication

Empowering citizens with digital, evaluative & information literacies

Openness & Transparency

Europe PMC

TUESDAY, 3 MAY 2022

Europe PMC improves discoverability of preprints

Europe PMC now includes the full text preprints supported by Europe PMC funders

Open science is at the heart of Europe PMC, providing access to open content and data. Recognising the role that preprints play as a way for life science researchers to openly and rapidly share their findings, Europe PMC has made over 420,000 preprint abstracts from 24 preprint servers discoverable alongside journal publications. Following the success of the COVID-19 full text preprints initiative, which currently includes over 31,000 full text COVID-19 preprints, Europe PMC is expanding the number of searchable full text preprints to include those supported by Europe PMC funders. Overall this new project aims to increase the discoverability of science reported in preprints, expand the collection of full text preprints for future analyses, as well as improve visibility of preprints supported by Europe PMC funders.

"As an archive of scholarly content, Europe PMC contributes to longevity and continued access to scientific data and findings presented in preprints.

We believe that preprints can remove barriers to open science and Europe PMC is committed to making the science reported in preprints more widely discoverable"

Open Science practices can increase public trust in science

Rosman T, Bosnjak M, Silber H, Koßmann J, Heycke T. Open science and public trust in science: Results from two studies. *Public Understanding of Science*. June 2022. doi:10.1177/09636625221100686

Table 1. Survey questions (Study 1).

ID	Wording	Response format	*M*	*SD*	Positive responses (%)
SQ1	How important do you think it is that scientific results are made available to the public free of charge (e.g., on the Internet)?	7-point scale, *not important at all* to *very important*	5.96	1.19	87.2
SQ2	How important do you think it is that the following scientific results are made available to the public free of charge (e.g., on the Internet)? • SQ2c: Study materials, datasets, and analysis code of individual studies	7-point scale, *not important at all* to *very important*	5.09	1.32	64.3
SQ3	My trust in a scientific study increases when I see scientists publicly sharing their study materials, their datasets, and their analysis code.	7-point scale, *do not agree at all* to *fully agree*	5.25	1.26	74.0
SQ4	My trust in a study from the field of psychology increases when I see scientists publicly sharing their study materials, their datasets, and their analysis code.	7-point scale, *do not agree at all* to *fully agree*	5.11	1.28	68.7
SQ5	My trust in a study from the field of medicine increases when I see scientists publicly sharing their study materials, their datasets, and their analysis code.	7-point scale, *do not agree at all* to *fully agree*	5.36	1.25	76.6
SQ6	My trust in a scientific study increases when I see that it was funded publicly (instead of by a commercial company).	7-point scale, *do not agree at all* to *fully agree*	4.74	1.47	53.4
SQ7	My trust in a study from the field of psychology increases when I see that it was funded publicly (instead of by a commercial company).	7-point scale, *do not agree at all* to *fully agree*	4.70	1.49	53.2
SQ8	My trust in a study from the field of medicine increases when I see that it was funded publicly (instead of by a commercial company).	7-point scale, *do not agree at all* to *fully agree*	4.81	1.49	56.9

Comparative analysis of retracted pre-print and peer-reviewed articles on COVID-19

Manraj Singh Sra, Mehak Arora, Archisman Mazumder, Ritik Mahaveer Goyal, Giridara Gopal Parameswaran, Jitendra Kumar Meena

doi: https://doi.org/10.1101/2022.07.12.22277529

"The increased adoption of pre-prints results in faster identification of erroneous articles compared to the traditional peer-review process"

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Opinion

Sometimes Science Is Wrong

Research is a self-correcting process, but that fact is often lost on the public

By Michael D. Lemonick

AUTHOR

Michael D. Lemonick is a freelance writer; the former chief opinion editor at *Scientific American*; and a former senior science writer at *Time* magazine. His most recent book is *The Perpetual Now: A story of Amnesia, Memory and Love*. Lemonick also teaches science journalism at Princeton University. Follow him on Twitter @MLemonick. *Credit: Nick Higgins*

"In scientific research, the newest thing is often the least definitive - we have seen this over and over with COVID -with science reported, then revised, as more information comes in"

"Even when the research is published in a major, peer-reviewed scientific journal, it can still turn out to be wrong, no matter how carefully it's done"

International Science Council

https://council.science/current/blog/tbb-webinars-takeaways

BLOGS VIDEOS

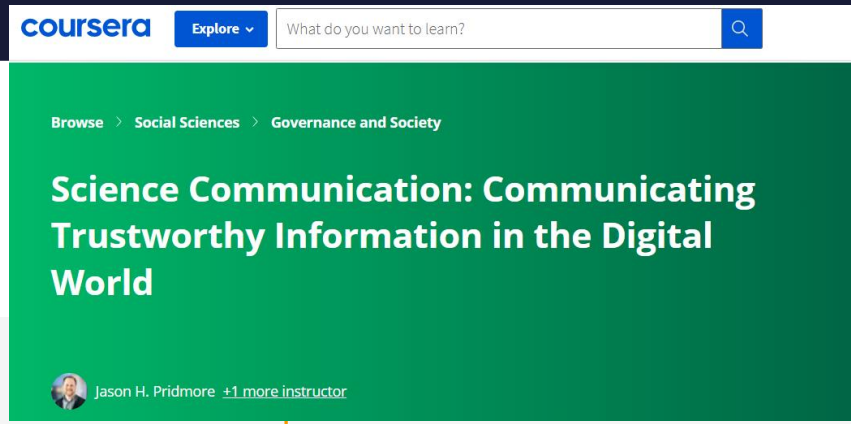
Six Takeaways on Science Communication from our Talk Back Better Webinar Series

Last week, the ISC concluded its successful webinar series on science communication. Nick Ishmael-Perkins, Senior Consultant at the ISC and host for the series, sums up the key takeaways from our weekly sessions that took place from May to June 2022.

[Un]Truths

Trust in an Age of Disinformation

Trustworthy, Reliable And Engaging Scientific Communication Approaches



Post-truth, fake news and misinformation are internet-age phenomena that raise suspicion of the **credibility and reliability of (scientific) information**. While news media have been suffering from a decline of trust in general, the negative consequences for scientific communication are particularly severe, because these can be abused to promote propaganda and conspiracies. In Europe, the media is one of the least trusted democratic institutions (Edelman Trust Barometer, 2018). At the same time, the media is also the most important or common communication channel translating and disseminating scientific information from researchers to the general public.

The TRESCA project members have taken on the challenge to study this challenge for the European Union, under the Horizon 2020 funding scheme. The **work plan listed on this page** provides insight into how the consortium aims to do this.

Project name: Trustworthy, Reliable and Engaging Scientific Communication Approaches

Project Acronym: TRESCA

Project number: 872855

Project Coordinator: Erasmus University Rotterdam

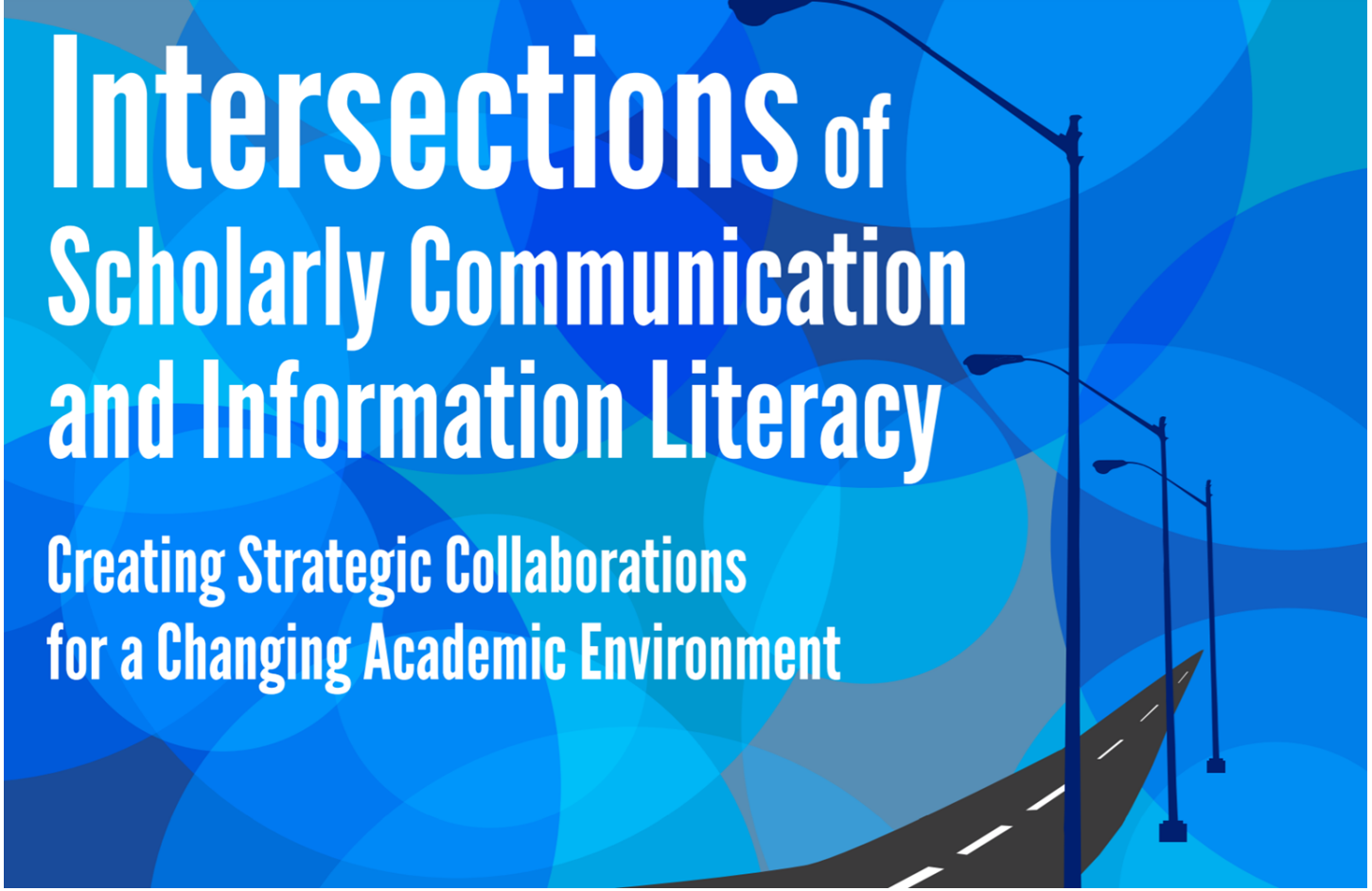
Start Date: January 2020

Duration: 28 Months

Contact: tresca[at]eur.nl

Research results: Cordis page

Empowering citizens with digital, evaluative & information literacies



ACRL, 2013: http://acrl.ala.org/intersections

“Every librarian in an academic environment is a teacher”

“All roles in an academic library are impacted and altered by the changing nature of scholarly communication”

How can we expect students and citizens to be able to source, evaluate & use research and information without understanding the publishing processes behind it, and the scholarly ecosystem it emanates from?

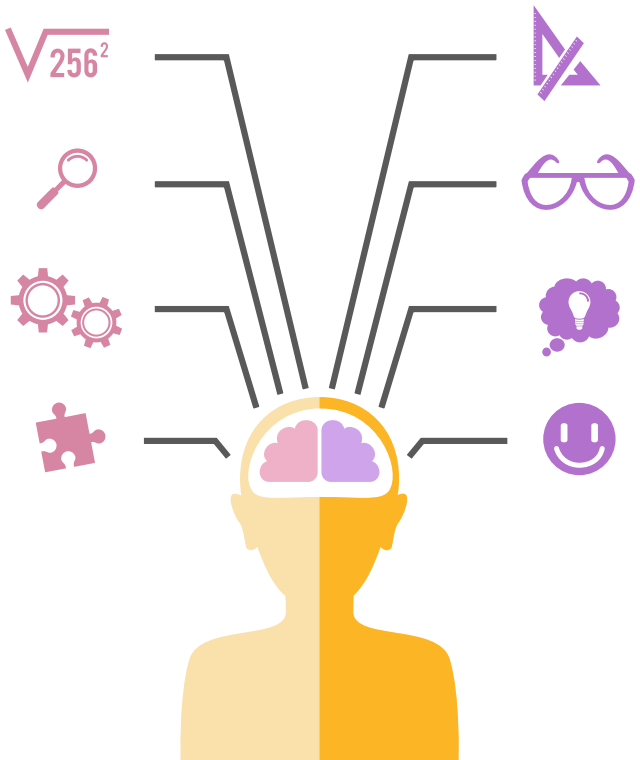
New Information Skills & Literacies

Understanding the scientific method

Understanding peer review

Ethical use of information

Critical thinking & evaluative literacy



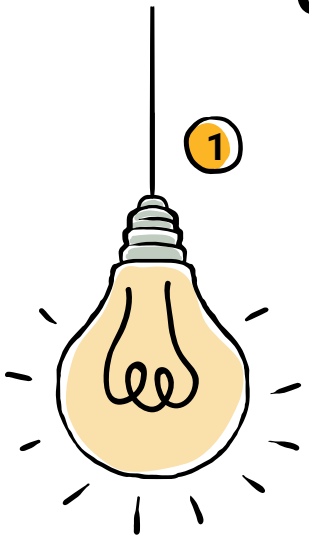
Data Literacy

Copyright literacy

Media Literacy

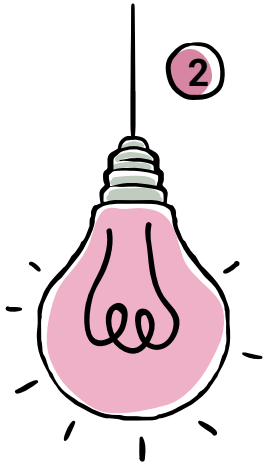
Science communication & public engagement

How can Open Science support an evidence-based culture?



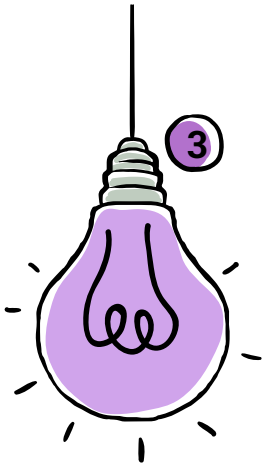
Information is Power

With power comes responsibility



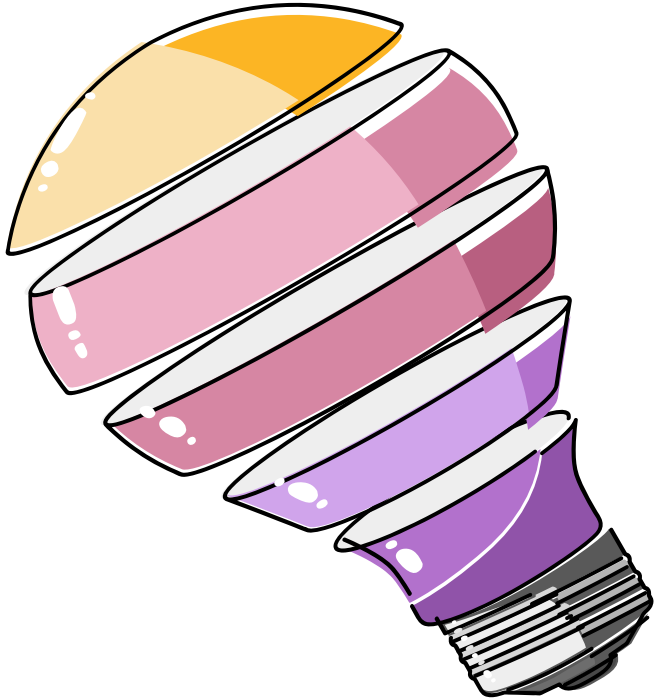
Transparency enables Trust

But it’s not everything



Collaboration with our communities

Shared values, shared responsibilities



Thank you :-)

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