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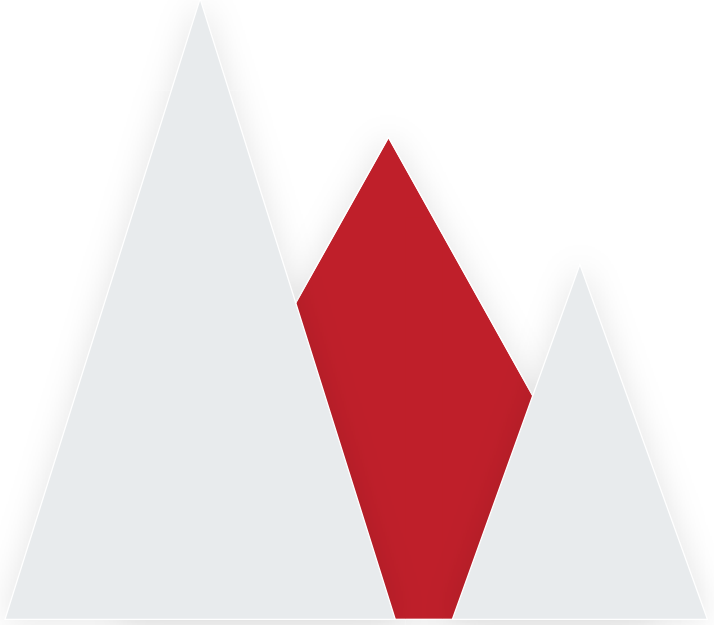
Research Insights



Evaluating and Promoting Science Communication Quality Online

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 824573

Lecture overview

Background

Objectives and approach

Quality complexity

Quality in context

Quo vadis? Promoting science communication quality in the future

Background

Opportunities for science communication online and via social media

- lower hurdles for scientists' public engagement, open access and open science

→ scientific knowledge more accessible to those outside science

Threats and challenges to public communication and science communication

- misinformation, strategic misuse of science
- information overload

→ consequences for the **quality** of science communication (cf. Peters 2012; Fähnrich 2021)

Objectives and approach

How can 'good' science communication be conceptualised in the digital science communication ecosystem?

Are there different standards for different settings of science communication online?

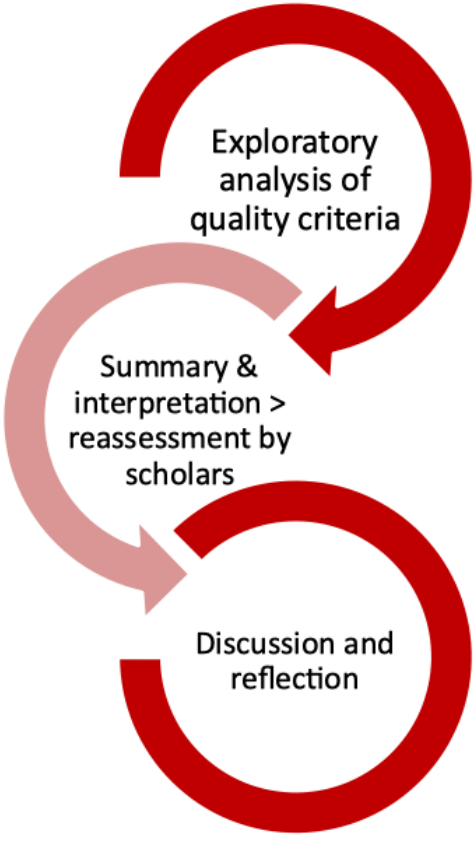
What standards can be applied to assess the quality of science communication online?

How can quality standards of science communication be promoted in an increasingly complex digital media environment?

Objectives and approach

Methodological approach:
Delphi study to assess quality criteria and standards for science communication.

- N = 31 science communication scholars.
- Conducted in two waves.
- Experts from 17 different countries.
- Approach that allows a group of experts to deal effectively with a complex problem.
- Iterative and anonymous process (Niederberger & Renn 2019).



Quality complexity

Meta-Criteria	Description	Most important criteria
Content	What is communicated?	• Relevance • Accuracy
Presentation	How is it communicated?	• Accessible language & style • Comprehensibility • Engaging communication
Technical	How does the infrastructure interact with the communication?	• Opportunities for dialogue and feedback • Technical accessibility
Context	What is the context of communication?	• Transparency • Clear purpose/motivation • Reliability of evidence • Expertise of sources
Process	What precedes/follows the communication?	• Definition of goals • Standards • Evaluation

Quality in context

Experts highlight that **context** is also important to assess science communication.

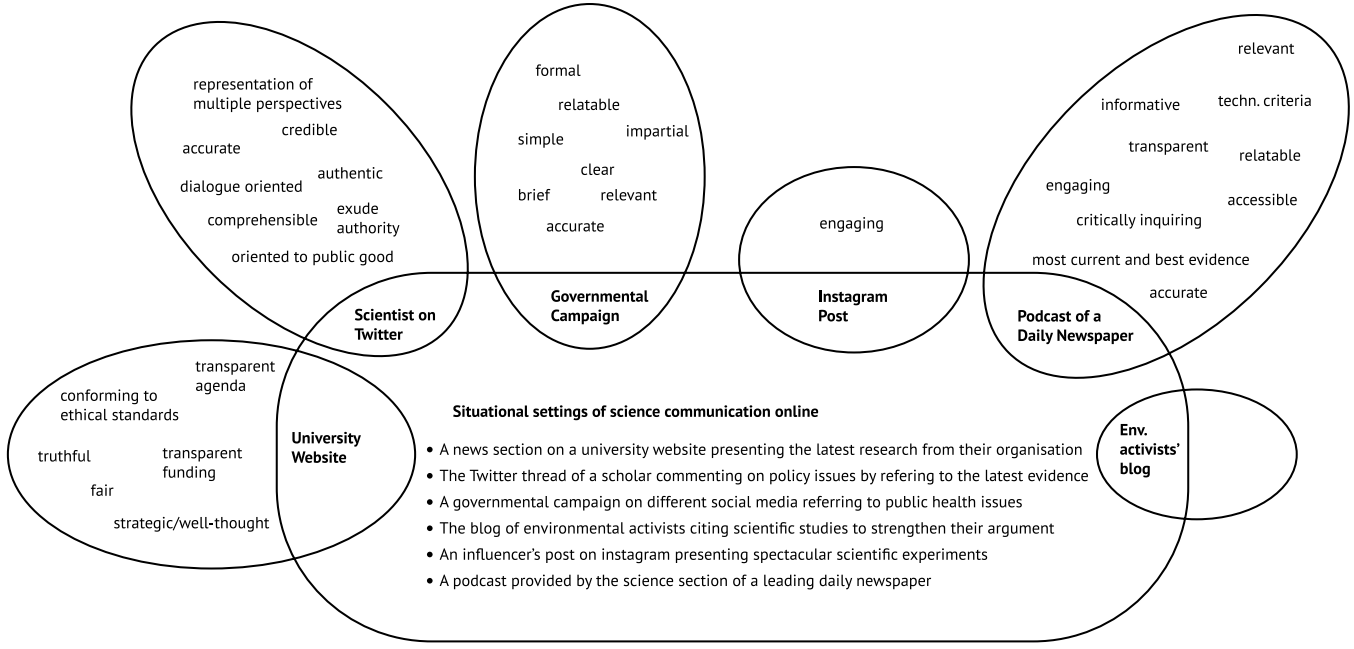
- quality cannot be assessed 'objectively'
- dependent on the expectations of certain actors (journalists, scientists, bloggers, users)

Quality is a 'matter of degree. It is not as simple as having or not having quality'. (Lacy & Rosenstiel, 2015)

Quality in context

Difficult to rate quality criteria:

A ‘matter of relative importance of different criteria in different settings, than a case of some not applying. They all apply, to a greater or lesser extent.’ (Participant, Wave 2)



Promoting science communication quality in the future

	Direct intervention	Incentivisation	Self-regulation
Informal	'Some kind of community assessment, where non-governmental and non-institutional agencies apply critical scrutiny' (p. 6).	'Quality standards should be conveyed and promoted as reflective tools and not as deterministic tools' (p. 21).	'Quality criteria for digital science communication cannot be set top down' (p. 24).
	'Evidence-based countering of [false] claims to try to limit the spread of misinformation' (p. 11).	'Foster a culture in which we can discuss openly and constructively criticize outputs with one another" (p. 7)	'Assessments of quality rest with individual audience members' (p. 23).
	'One might think of a mechanism similar to fact checking/seal of approval' (p. 22).	'With more science communication done on a professional basis, opportunities to promote quality standards increase" (p. 6)	'Quality should be defined and promoted within the specific communities of practice' (p. 19).
	'Partnerships with the major social media platforms to quickly identify problematic content' (p. 11).	'Awards that name role models and provide incentives' (p. 26).	'Starting with the audience to improve media literacy should be prioritized' (p. 25).
	'This can only be effective if policy and funding organisations champion the cause of quality' (p. 10).	'Educational institutions and professional member bodies have a responisbility to promote best practice/professional standards for quality' (p. 17).	'To invest in better education and a critical view of society' (p. 24).
Formal	'Direct blocking of content, and criminalization' (w. 2, p. 7).		

Promoting science communication quality in the future

- Need for education and reflection to raise awareness within the science communication community.
- Strengthening the collaboration between scientists and practitioners.

→ Evaluate quality discourse.

- FUTURE AIM: Reflecting upon science communication training, students contribute to this challenge.

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Thank you for your attention!

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