



quest

Toolkit for journalists reporting on science

This set of slides was produced within the project QUEST - Quality and Effectiveness in Science and Technology Communication.

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The following set of slides is a self-explaining presentation open to science communicators and trainers.

Please feel free to use these slides or part of them as a tool for lectures in science communication.

Indicators of quality were co-designed with stakeholders and practitioners from various European countries.

For more details on the indicators please download:
<https://questproject.eu/download/12-quality-indicators-for-science-communication-guide-for-science-communicators/>

Why is quality science news reporting so important?

European Union's Horizon 2020 QUEST project devised tools and guidelines to boost the effectiveness of science communication – to encourage people in Europe to become more **scientifically literate**.

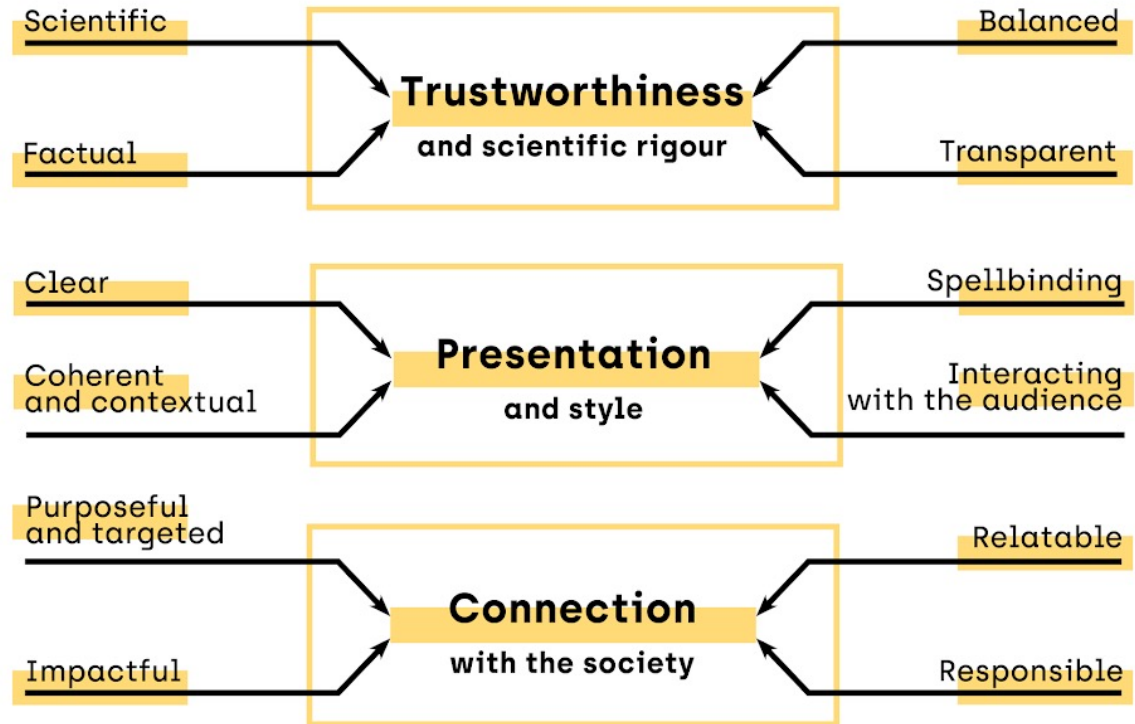


Part 1

Quality indicators for effective science communication

A pool of skills :

- Scientists
- Journalists
- Science communication academics
- Digital innovation creatives
- Social media experts
- Science gallery and museum explainers



12 QUALITY INDICATORS for SCIENCE COMMUNICATION

The 3 key strands of effective science communication

- **Trustworthiness** – based on evidence-based, scientifically rigorous information
- **Presentation and style** – based on clear and coherent reporting which grabs the audience's attention and recognises their concerns
- **Connection** with people's concerns within their communities and in society generally – audiences respond to information that directly relates to their real life experiences

The first pillar of quality science journalism

- Viewers and readers need to **TRUST** the information your report is based on
- They need to be confident the content is based on scientific findings that have been rigorously and ethically produced
- Science news on various platforms is awash with dangerous misinformation and pseudoscientific ‘facts’ – people are confused
- Science reporting should aim for **BALANCE** as far as possible, without straying into ‘false equivalence’ (more on this later)
- Your reporting should be **TRANSPARENT** and **FACTUAL** – make clear the origin of the scientific findings, the scientific method, how it was funded

The second pillar of quality science journalism

- **PRESENTATION** and **STYLE** are key if you want your report to have impact and influence
- People are confused on critical issues – COVID-19 & vaccines, the climate crisis for instance – and demand **CLEAR** and **CONTEXTUAL** reporting
- It must seize their attention and offer engaging content – be **SPELLBINDING**
- Some of the most impactful science reporting engages directly with the audience, offers **INTERACTION** with people affected by the issue and draws on their experiences

The third pillar of quality science journalism

- Science journalism (and science!) do not operate in a vacuum – at the core of both should be a **CONNECTION WITH THE SOCIETY** they are active within and have a **RESPONSIBILITY** towards
- To enlarge on this responsibility towards the public at large – science reporting should be **PURPOSEFUL** and **TARGETED** as readers and viewers will be drawn to content which is relevant to their lives
- Science reporting can be written off as dull, or difficult to understand – so reporting should be **IMPACTFUL**, memorable and engaging

Part 2

10

Checklist for effective science journalism

- Science
- Facts
- Balance
- Being Transparent
- Being Clear
- Being Spellbinding
- Interacting with the audience
- Having a clear purpose
- Creating impactful stories
- Creating relatable stories
- Developing responsible journalism



About the science

As a journalist covering science, your reports should be accurate, fact-checked and evidence-based.

To inspire confidence in your audience, you should make the exact scientific source(s) of the content completely clear.

- How clear are you that established principles of scientific research properly underpin the content of your story?
- Have you interrogated the story angles widely, and looked for further informed opinion or information from respected sources which will add perspective to the issue and properly inform readers and viewers?

About the facts

You needn't be a science graduate or necessarily understand every complex scientific concept.

But it is very important to develop and maintain professional scepticism when reporting on scientific findings.

- Despite the pressure of impending deadlines and the desire to be 'first with the story' – have you fully verified the research findings you are working from?
- Have you considered the possibility of biased or partial interpretation in the methodology, analysis, and reporting of the scientific information you are dealing with in your story?
- Have you scrutinised the factual bases of the research evidence you are working from and cross-referenced across similar research on that issue?

About achieving balance

As well as including comments from key stakeholders, seek out independent voices from outside the immediate research base.

- In the selection of sources, have you tried to locate new best experts and most relevant stakeholders, beyond the traditional or convenient sources?
- Have you considered your selection of sources from the viewpoint of diversity (e.g. gender balance)?
- Have you considered the issue of ‘false balance’ in your coverage of issues in which the scientific basis of facts is well established? For instance, on climate breakdown – denial science is discredited and need not benefit from the application of ‘balance’

About being transparent

You provide information about the methods used in the research, explaining and illuminating key aspects of the scientific process.

You make clear the funding and affiliations of both the research base and the organisation which sponsored it.

- Have you maintained a critical or investigative role – as watchdog not cheerleader – if appropriate?
- Have you been careful to make clear the methods the scientists used as well as their results?
- Make sure you investigate and expose possible conflicts of interest
- Remember to maintain journalistic independence while using PR or press release material
- Does the scientific method used make sense? If it's flawed, based on what you know about established processes and principles, be sure to point this out

About being clear

Good journalism uses simple and accessible language while not ‘dumbing down’. Your reporting should offer a clear focus and outline key messages.

- Have you ‘translated’ complex scientific jargon into easy-to-understand language accessible to all readers?
- At the same time, have you avoided oversimplifying or sensationalising the material – with the risk of leaving the audience anxious or confused about what is important about the scientific findings?
- Have ‘headline’ or key messages been highlighted via the language and structure of the material?
- Have innovative ways of conveying the key findings – such as data visualisation – been included within the report?

About being coherent

Your reporting provides the wider context for the issues covered.

The report is coherent in its structure and style.

- Does the reporting offer clarity and coherence – even with the most complex and multifaceted issue?
- Is the report comprehensive and readily understandable in its own right?
- Is your article or report set within the wider public sphere in addressing public concerns, interests and preoccupations?
- Have you used engaging language and phraseology to make logical connections between the scientific findings and the readers' preoccupations and interests?

About being spellbinding

The most effective journalism is emotionally engaging, for example by using narrative and storytelling.

It makes full use of each format's capabilities [online, TV, audio etc], by offering multisensory experiences, and finding innovative ways to present science information.

- Have you used various techniques of storytelling to maximise emotional engagement and native human curiosity?
- Does your reporting offer a narrative thread which draws the reader into the story and keeps her/him engaged?
- Have you used a multiplicity of formats and techniques to enhance the way the science is reported and communicated?
- Have you taken full advantage of technological innovations within the media industry to engage audiences in new ways and tried to attract a diverse audience by multisensory means?

About interacting with audience

Your reporting should involve the audience in a dialogue and treat them respectfully.

- In covering your story, have you taken as a starting point the public interest and societal concerns?
- Have you been extra sensitive when addressing issues that are complex, sensitive or highly disputed – while not side-stepping the main issues?
- Does the tone and focus of the report encourage further exploration of the issue among your audience?
- Are you making full use of in-house channels for your audience to react to the story and to develop it via social media and reader responses?

About having a clear purpose

Effective journalism is focussed and does not exist in a vacuum.

Your reporting should have a clearly defined objective, should be knowledgeable about its audience and tailored to reach the target groups.

- Have you considered and addressed the particular concerns of your audience?
- Have you considered the audience at every level of engagement – from highly specialised outlets like *Nature* or *Scientific American* where a scientifically sophisticated readership can be assumed, to a tabloid audience with limited interest in ‘science’ and little pre-existing scientific knowledge?
- Have you structured the reporting – at all levels of engagement – to clearly present the most pressing and newsworthy aspect of the research, making implications clear?

About crafting impactful stories

Effective storytelling often generates changes in people and in society by introducing new knowledge and ideas, stimulating debate, and challenging existing biases.

- Are complex findings presented coherently in a way which makes them accessible and easily understood?
- Bearing in mind your responsibility to public interest, safety and security, is there a case for assuming a campaigning stance on this subject?
- Have you invited reader and viewer response on the issue and on your article? And are you prepared to develop the story based on opinions and experiences received directly from the public?
- Does your story outline the possible impact and ramifications of findings exposed in it? What differences will they make collectively to society and individually to citizens?

About crafting relatable stories

Your reporting addresses real life questions and concerns, and relates scientific results to the everyday lives of people.

The communication of new findings and theories is timely.

- Is the story located in the real world and in human preoccupations and concerns?
- Is it relayed in language and concepts people can readily understand and relate to – making connections with their everyday lives and experiences?
- Science stories like many others have political and societal implications – have these been drawn out and explained/explored?
- Have you thought about methods to maintain contact with the audience and maintain their involvement in the story as it develops?

About developing responsible journalism

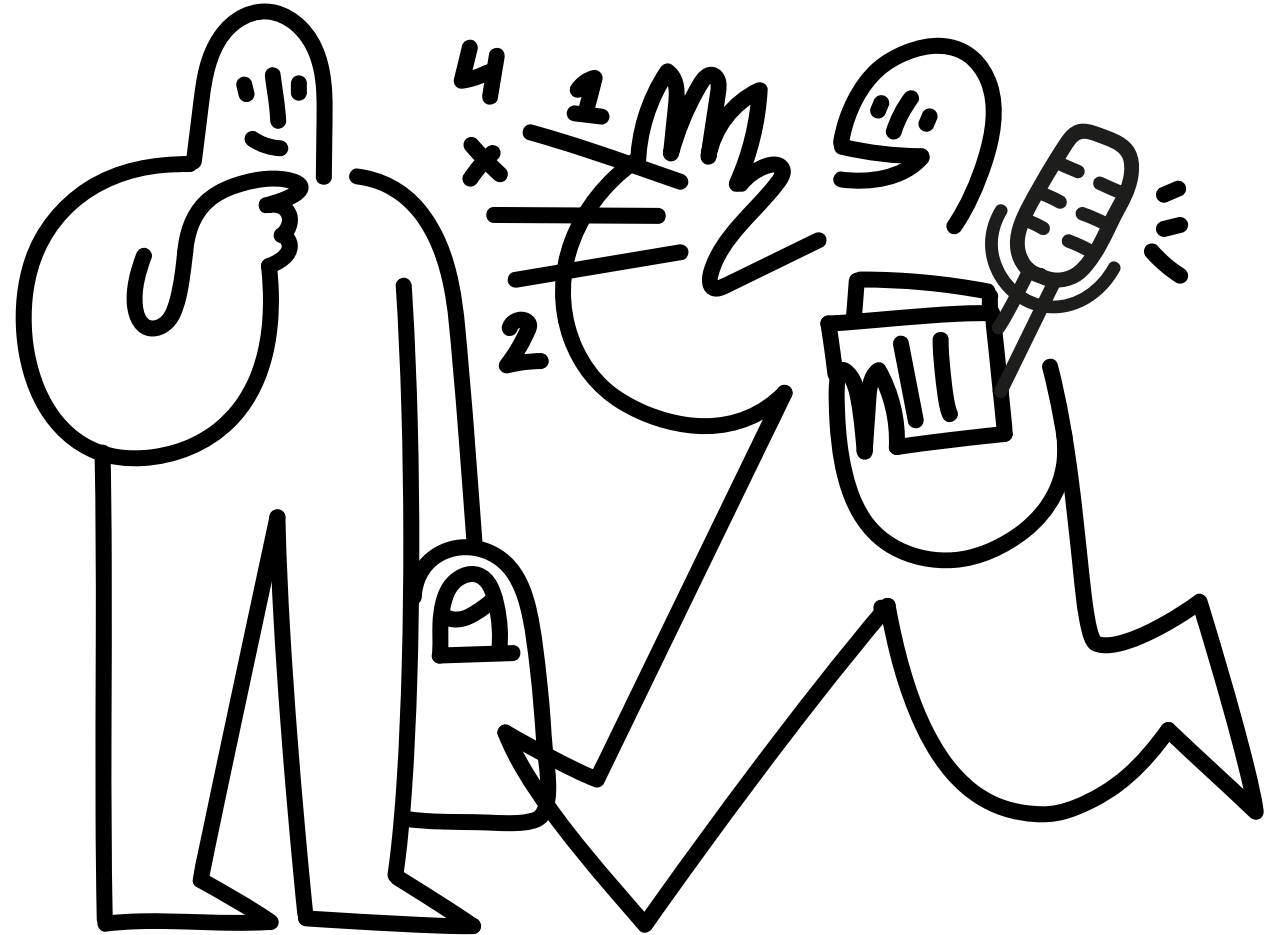
The work of a responsible journalist is socially and politically conscious, reflects a diversity of views when addressing controversial topics, and follows ethical standards.

- Is the reporting ethically sound? – in particular this means being impartial, well sourced and not resorting to alarmism/sensationalism /clickbait
- Does the reporting follow the appropriate ethical code for journalists and fully adhere to these practices?
- Have you scanned the report to make sure it is accurate and coherent?
- Does the reporting make clear the possible impact on society and everyday life of the scientific findings?
- How far have divergent views been acknowledged and included – without sullyng the overall message and invoking ‘false balance’?

Outputs

The QUEST project has devised other tools for better science journalism

- Digital tool to support research into science-based stories
- Journalists' toolkit
- Curriculum on science journalism for master students
- A podcast series complementing the toolkit content



For more information, please contact us at:

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