

Checklist for scientists:

Quality and effective science communication for public audiences


Jacopo Pasotti, Ilda Mannino,
Alessandra Fornetti
Venice International University



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The following checklist developed within the H2020 QUEST project supports scientists in delivering their message and fine-tuning their communication skills to the public.

It is the result of several focus groups and interviews with both scientists working in different fields and trainers experienced in science communication.

The checklist also draws from the literature review of published studies on scientists' perception and from available guidelines on science communication.

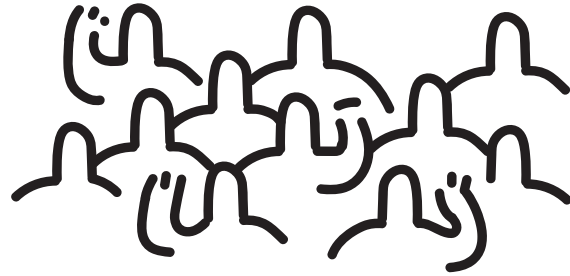
Some of the points in the checklist apply in specific contexts and not in others: scientists are encouraged to go through the list and choose those elements that apply to their circumstances.

1. Are you allocating enough *time* for preparation and improving your communication skills?

Scientists with experience in science communication say it takes between half a day and one to two days to prepare for a public event.

Of course, the preparation depends on the communication format: preparing for an interview could take less time than preparing for a talk at a Science Festival, but in general it is important to allocate a substantial amount of time to get ready for a communication event.

Take your time to get ready for communication events.



2. Do you know who your *audience* is?

Communication has to be tailored to the audience. To this purpose, scientists have to know their audience – their scientific level, age, demographic...

This requires examining the public you plan to talk or write to. Carefully addressing your audience requires a great level of awareness.

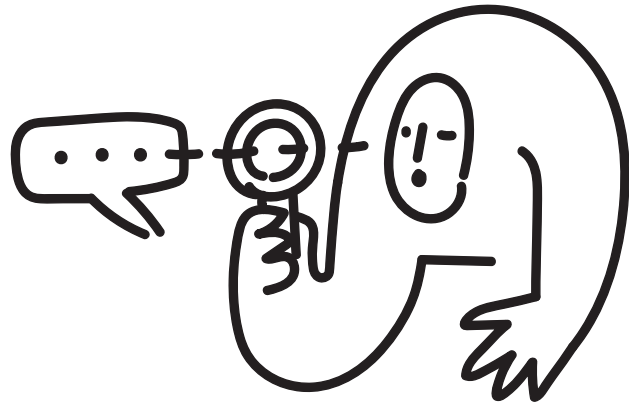
Get to know your audience and tailor your communication to it.

3. Have you identified the key *messages* to deliver and kept the focus on them?

Opportunities to communicate to the general public are not frequent. It might be tempting to present all results available or to deliver a dense lecture.

However, the public might feel overwhelmed by a lot of information and messages.

Why not concentrate on one or a few substantial messages and keep others for other occasions?



Staying focused on a few clear messages is the most effective way to address the public.

Frequently ask yourself: “am I still on topic, or am I digressing?”

Select a maximum of 2-3 key messages that you want the audience to come away with and concentrate on them.

4. Are you framing the message so that it sparks curiosity and is compelling to the public?

Scientists are used to attending lectures and conferences as well as to reading scientific papers. The public may not.

Rather than lecturing, or writing a technical text, scientists preparing to communicate should think of alternative ways to frame messages, in a way that addresses the concerns and curiosity of the public.



Is there an angle that may engage your audience or answer questions they may have?

Are there topics that are familiar to your audience?

Frame your messages to address the public's concerns, interests and curiosity.

5. Are you linking to current facts or events?

Your presentation, interview, or text is happening in a dynamic world and society.

Trying to link your communication to current facts or events, such as the news of the day, will strengthen the message.

The topic chosen should be relevant to this period of time, in these months, in these years.



6. Are you communicating something that you also care about?

Unless you are required to do something specific, communicating about a topic that you care about will help the public to appreciate your communication.

After all, you are a citizen too, so why not connect your communication with something that you consider important to yourself, your family, or your community?

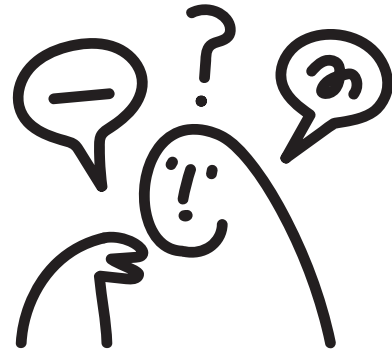
7. Are you *telling stories* or just **delivering a list of facts or numbers?**

Scientists base their studies on data, numbers, graphs, hard facts, and percentages.

When communicating, they may tend to deliver a list of numbers or evidence.

The use of stories, images, and metaphors will help the audience to follow your presentation and take in your message.

Use stories and metaphors as a means to engage the audience.



8. Are you using a *simple explanation*, can it be understood by **the public?**

One objective when preparing for a communication event is to be as clear as possible, and clarity depends also on the public – their ability to understand and appreciate an explanation.

Don't assume that people will know what scientific terms mean – offer an explanation.

9. Are you using *short sentences*?

This is a mantra for any sort of communication: less is more!

Strive for brevity: use one word as opposed to three.

10. Have you strategically planned ways to *open a dialogue and interact with your audience*?

Communication is a dialogue, a two-way experience, and sometimes it follows unexpected paths.

Opening a conversation with your audience rather than giving a lecture

helps both sides to better understand each other.

It's not about broadcasting to a captive audience, it's about interaction and preparing yourself for it.

Think of activities, different from simply answering a question, that let the audience handle tangible objects whenever possible.

We retain more information when actively engaged in a discourse, rather than being passive listeners.

Don't focus exclusively on presenting your arguments: ask questions, invite the audience to tell their points of view and be prepared to address their questions.

11. Are you carefully thinking about how to keep your delivery or writing lively and monitoring the public's reaction?

Science can be very dense, sometimes not easy to follow and interpret.

Interrupting a talk by introducing an activity, showing a video, playing music, telling an anecdote, are all ways to keep your text or your talk more lively that are worth exploring.

Although when writing or talking on the radio it might not be possible, during a speech or a class

scientists should try to always be aware of how the public is reacting to the presentation.

Are they following? Do they appreciate the presentation? Are they puzzled, entertained, curious?

Think about doing something more than just speaking. Think of ways to keep the audience's attention throughout the presentation.

12. Have you set out strategies to deal with scepticism or distrust?

Especially on controversial topics, scientists would benefit from being prepared for scepticism or distrust.

They could face some challenging questions, even confrontation.

A general rule is not to allow confrontation to grow; a kind invitation to keep further comments for a later private discussion could be suggested.

Rather than denying scepticism, try to find a common ground and be open to a constructive dialogue.



Distrust and challenges cannot always be foreseen, but being prepared, where possible, could save you from difficult and embarrassing situations.

A good strategy to cope with scepticism is to look for shared values, a common ground, and build your discussion from there.

13. Have you *practiced your communication with non-experts?*

It is very useful to rehearse oral communication in front of non-experts (e.g. relatives, friends, whoever is available...) as well as to ask them to read a written communication to be sure that it is understandable and engaging.

Rehearse, rehearse, rehearse... better if with non-experts.

14. Are you in touch with *your communication (or press) officers?*

When communication goes through the media, look for help.

Nearly all research institutions have a communications office, and they are there to support scientists in dialogue with the media and the public.

Check if your institution has a communications office or experts and ask for their support.

Interact with your press officers: they know how to deal with the media