

Inform, interact, involve

CLARIFICATION of further TERMINOLOGIES

There are many terminologies and concepts besides *science communication* when it comes to communicating science or engaging the public with science. But there are no unanimously agreed upon definitions.

So before we go any further, here are a few more descriptions of terms and concepts you will encounter in this book.

Let's start with **“open science”**: This is about making research more accessible and transparent to other researchers and to society at large. It is a concept that embraces different means of opening up research. The umbrella of open science includes open access to scientific publications, openly available research data, educational resources, software and hardware. The fact that science communication, public engagement, citizen science and altmetrics (alternative ways of measuring the impact of research) are also part of the open science concept is less well known.

SciCom can be more or less interactive:

- ◆ **“Dissemination”** is characterised by one-way communication aimed at a recipient, such as press releases and popular science lectures.
- ◆ **“Dialogue”** invites all parties to play a role as both sender and receiver. Both researchers and the public can speak and take an active interest in each other's views, such as in science cafés and other engagement formats.
- ◆ **“Co-creation”** gives all parties the opportunity not only to express their views, but also to be involved in, participate in and thereby influence the research process.

DEGREE OF ACTIVE PARTICIPATION →

Communication about research with the outside world.



5.



“Public engagement”, also known as “science engagement”, is a concept that encompasses a wide range of collaborative activities. The *National Co-ordinating Centre for Public Engagement (NCCPE)* in the UK defines it broadly: “*Public engagement is a two-way process, involving interaction and listening, with the goal of generating mutual benefit.*” In some countries, SciCom is separate from public engagement, while in others, engagement with the public or with specific groups or actors is seen as a way of conducting SciCom.

“Citizen science” is a common feature of co-creation, where the public is directly involved in research and innovation processes, often helping researchers to collect and/or review large amounts of data. It can also involve collaboratively formulating research questions, testing certain methods, and compiling or communicating findings.

“Science education” is the teaching and learning of science. It can take many forms and involve different levels of interactivity. The term is used to emphasise the aim: to increase knowledge of science or research among pupils, students or the public.

In the context of SciCom, you may still come across “outreach” and “popularisation”, somewhat outdated terms that can be used for different forms of SciCom activities.

Regardless of the various terms and concepts, science communication is a growing field of research and a key practice. It is supported by international scientific journals, networks and conferences. Most countries have decided to work towards open science. However, in order to be accessible to people outside academia, science and research must be communicated in an understandable, inclusive and evidence-based way.

Co-creation

Dialogue

TWO-WAY
COMMUNICATION

ONE-WAY
COMMUNICATION

Dissemination

Recommended reads:

- ◆ UNESCO recommendation on Open Science -UNESCO Digital Library, <https://unesdoc.unesco.org/ark:/48223/pf0000379949.locale=en>
- ◆ Main open access or partially open access SciCom publications: JCOM (*J. of Science Communication*), *Research for All*, PUS (*Public Understanding of Science*) and *Science Communication*.
- ◆ Continuous updates on topical SciCom research, methods, activities, projects, courses and events: The global PCST (*Public Communication of Science and Technology*) mailing list: <https://www.pcst.network/discuss/>